

FIG. 1

09509247 053000

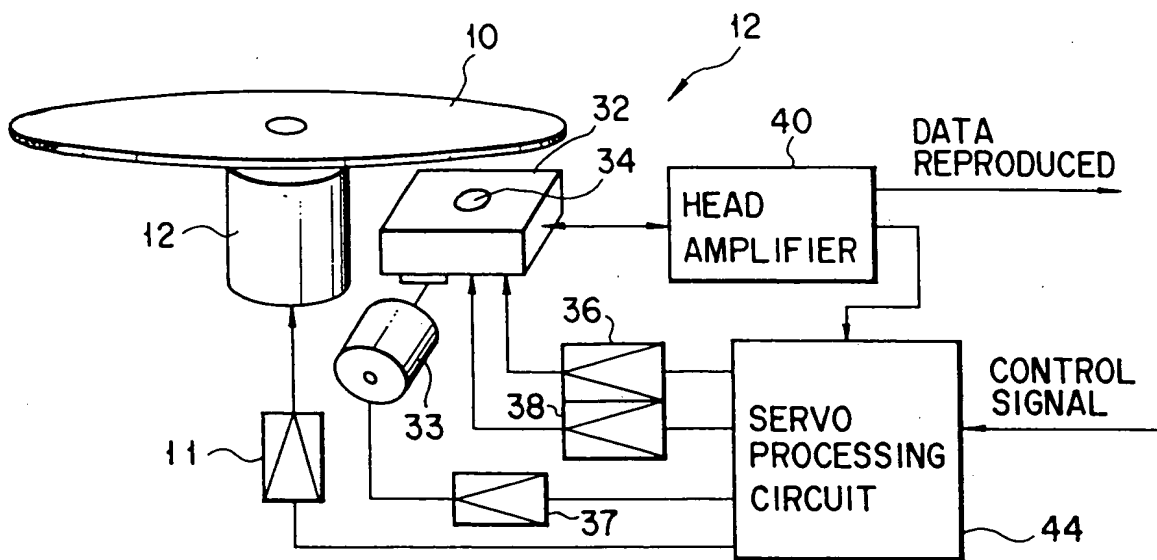


FIG. 2

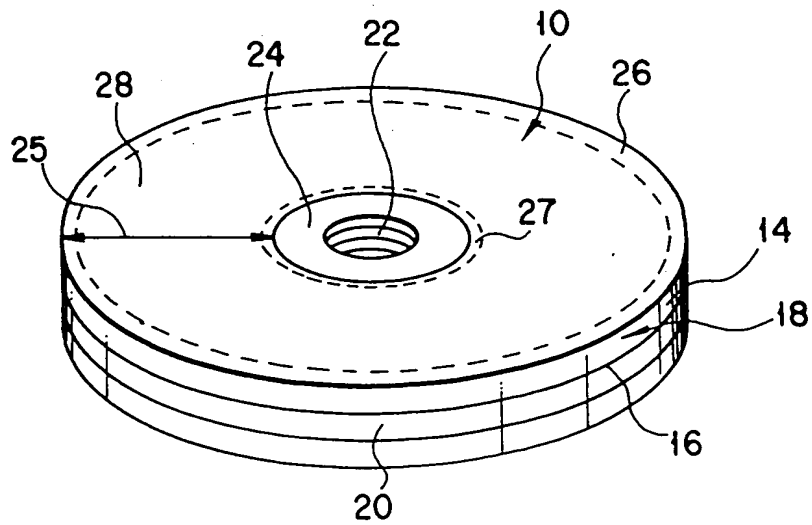


FIG. 3

LOGIC BLOCK NUMBER

27 — LEAD-IN AREA

0

72 — SYSTEM AREA

16

74 — VOLUME MANAGEMENT INFORMATION AREA

24

76 — FILE 0
(DISK INFORMATION FILE)

24+n

78 — FILE 1
(MOVIE FILE OR MUSIC FILE)

24+n+m

24+n+m+k

26 — LEAD-OUT AREA

VOLUME MANAGEMENT INFORMATION REGION 70

LOGIC BLOCK NUMBER = n

LOGIC BLOCK NUMBER = m

LOGIC BLOCK NUMBER = k

REGION

FILE 99
(MOVIE FILE OR MUSIC FILE)

FIG. 4

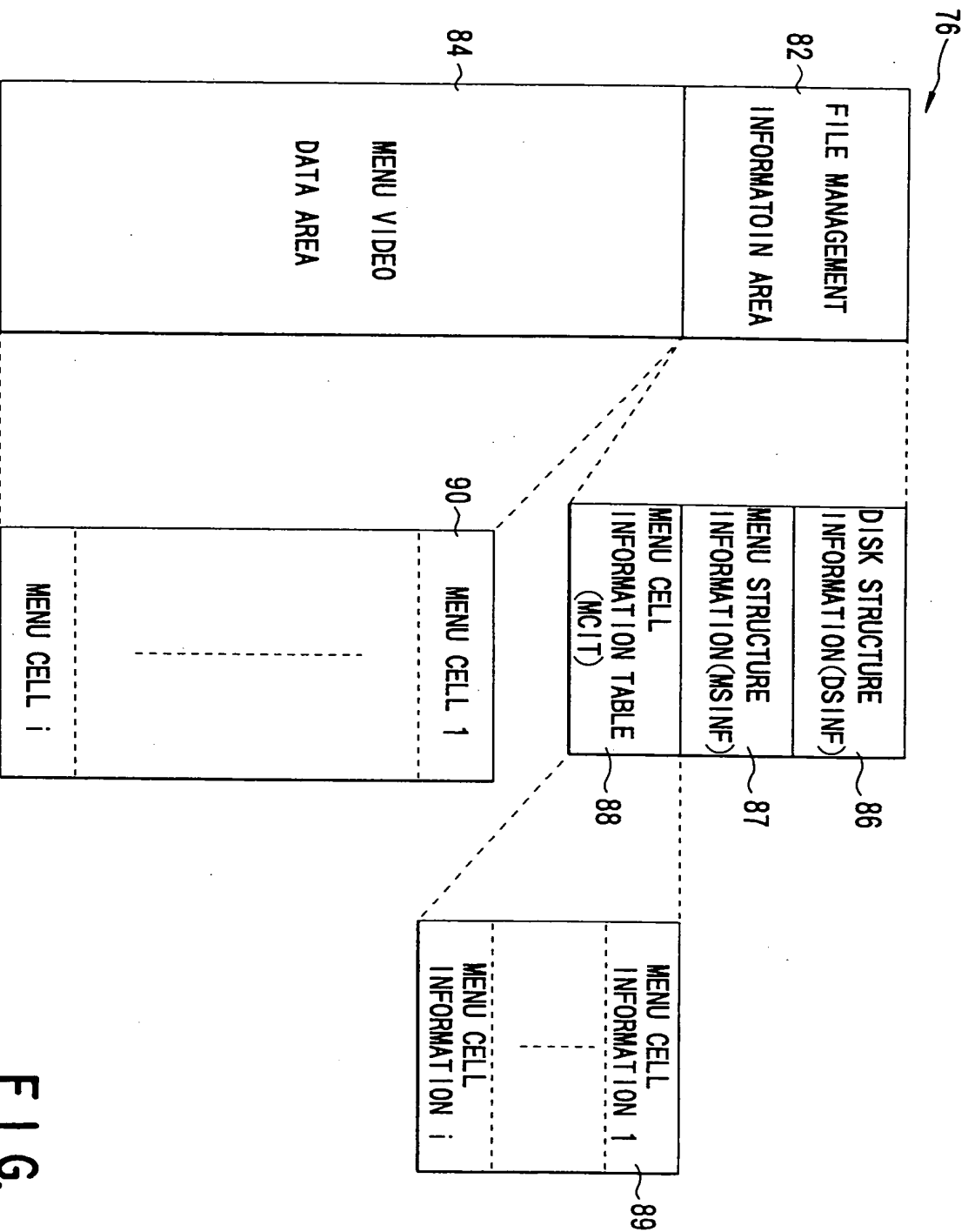


FIG. 5

09609247 063000

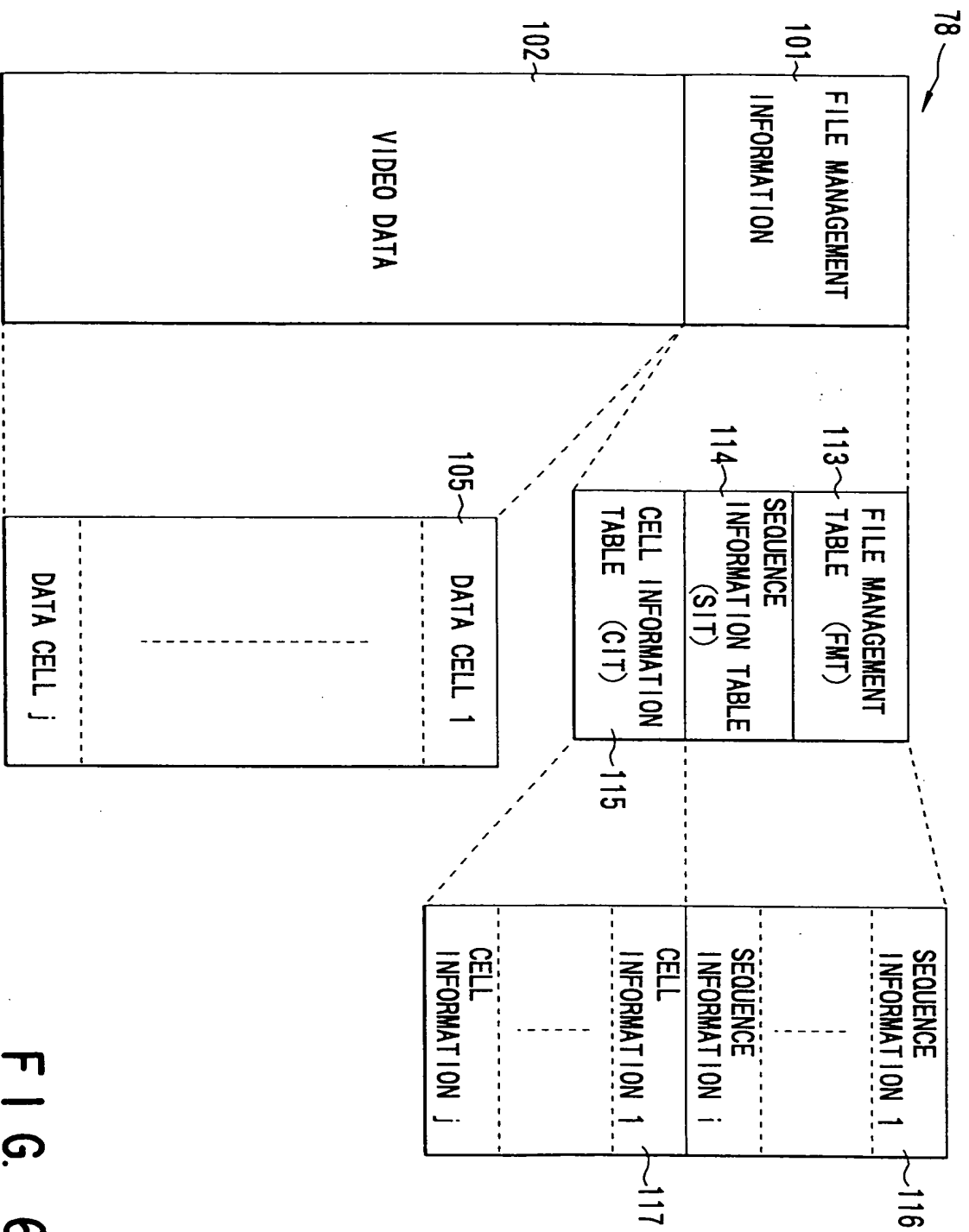


FIG. 6

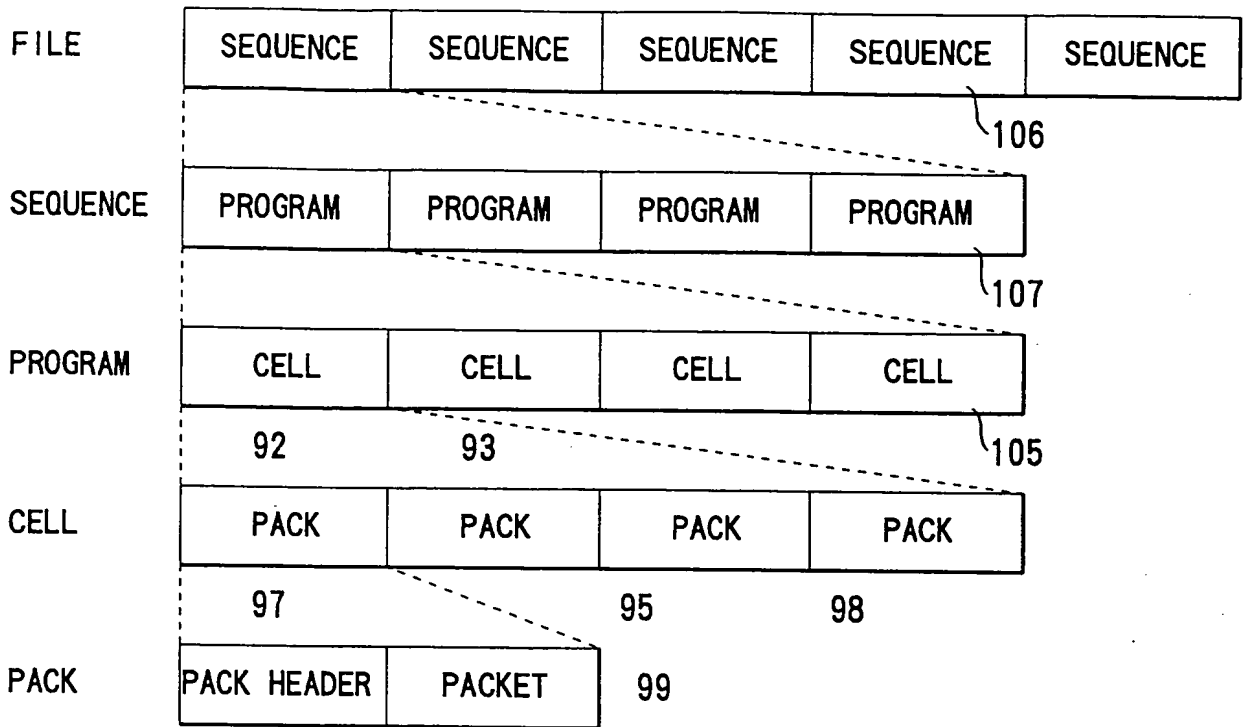


FIG. 7

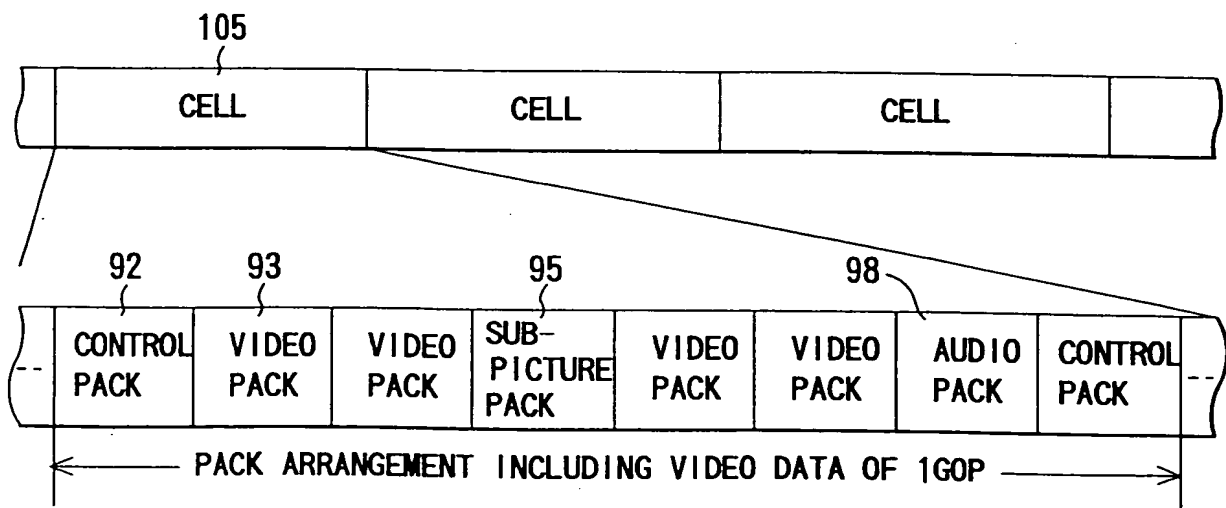


FIG. 8

[illegible]FIG. 9

FIG. 10

FIG. 10

FIG. 11

FIG. 11

-50

—S 1

✓ S2

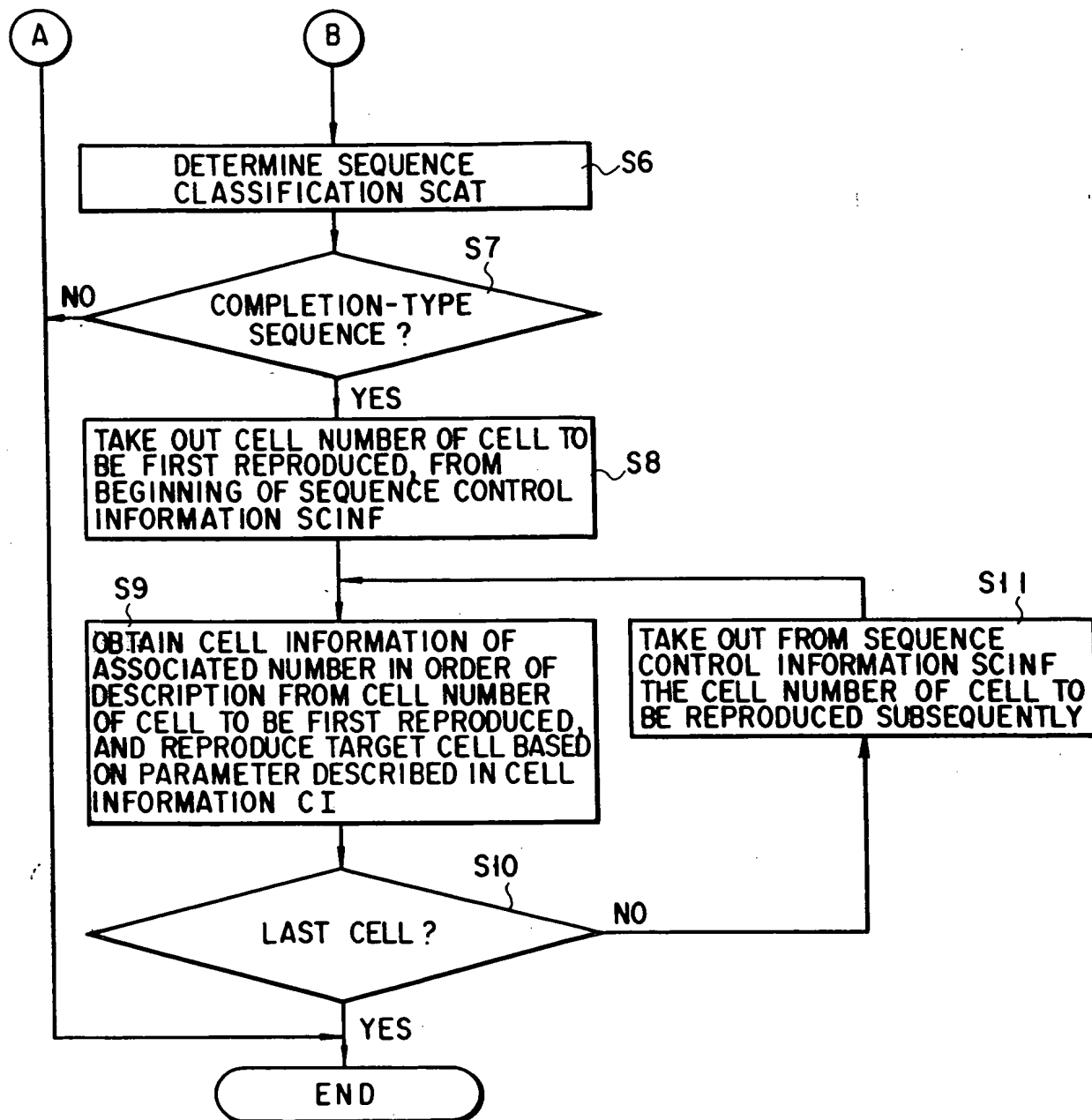
S3

NO

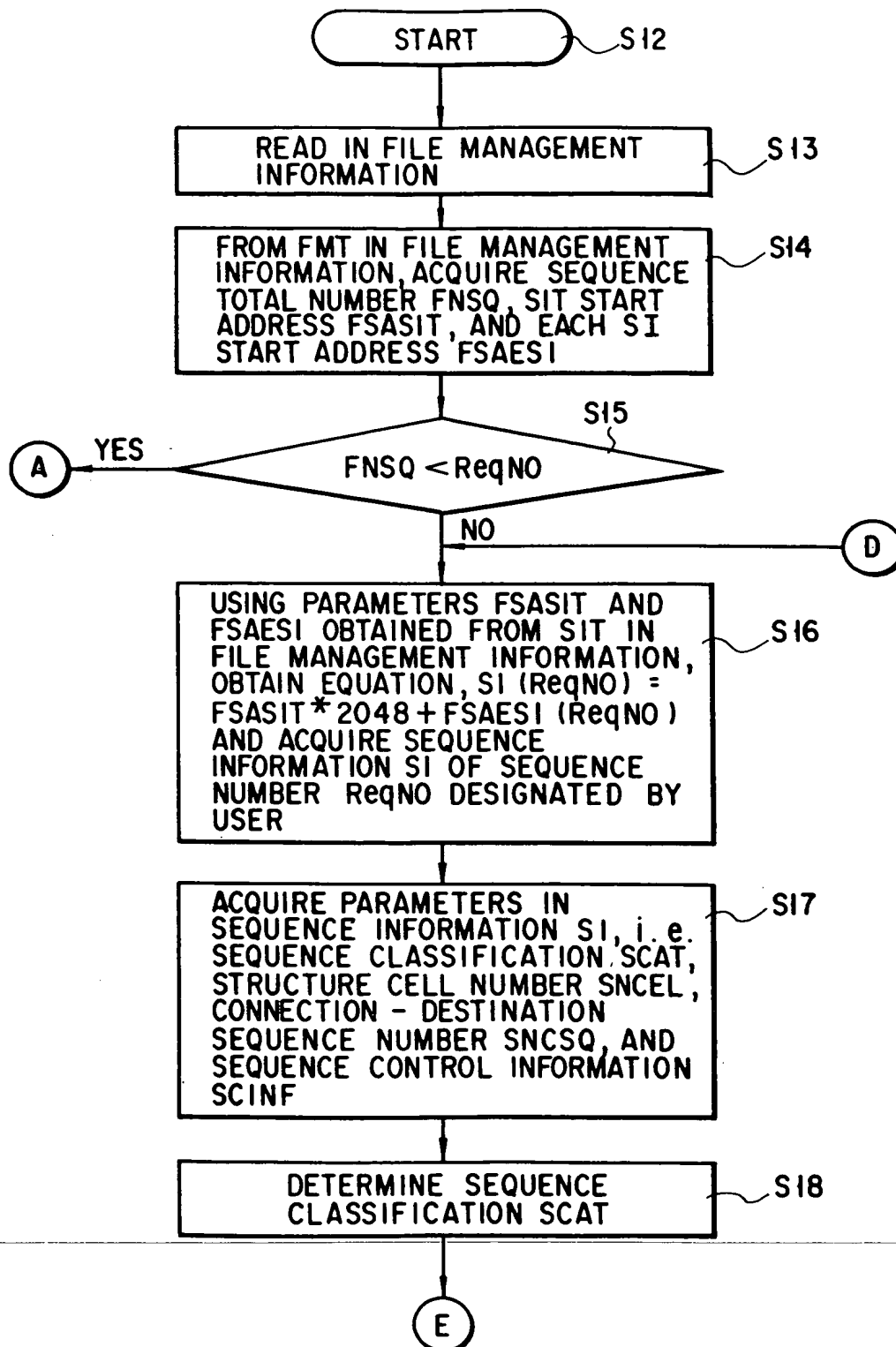
-S4

55

FIG. 12



F I G. 13



F I G. 14

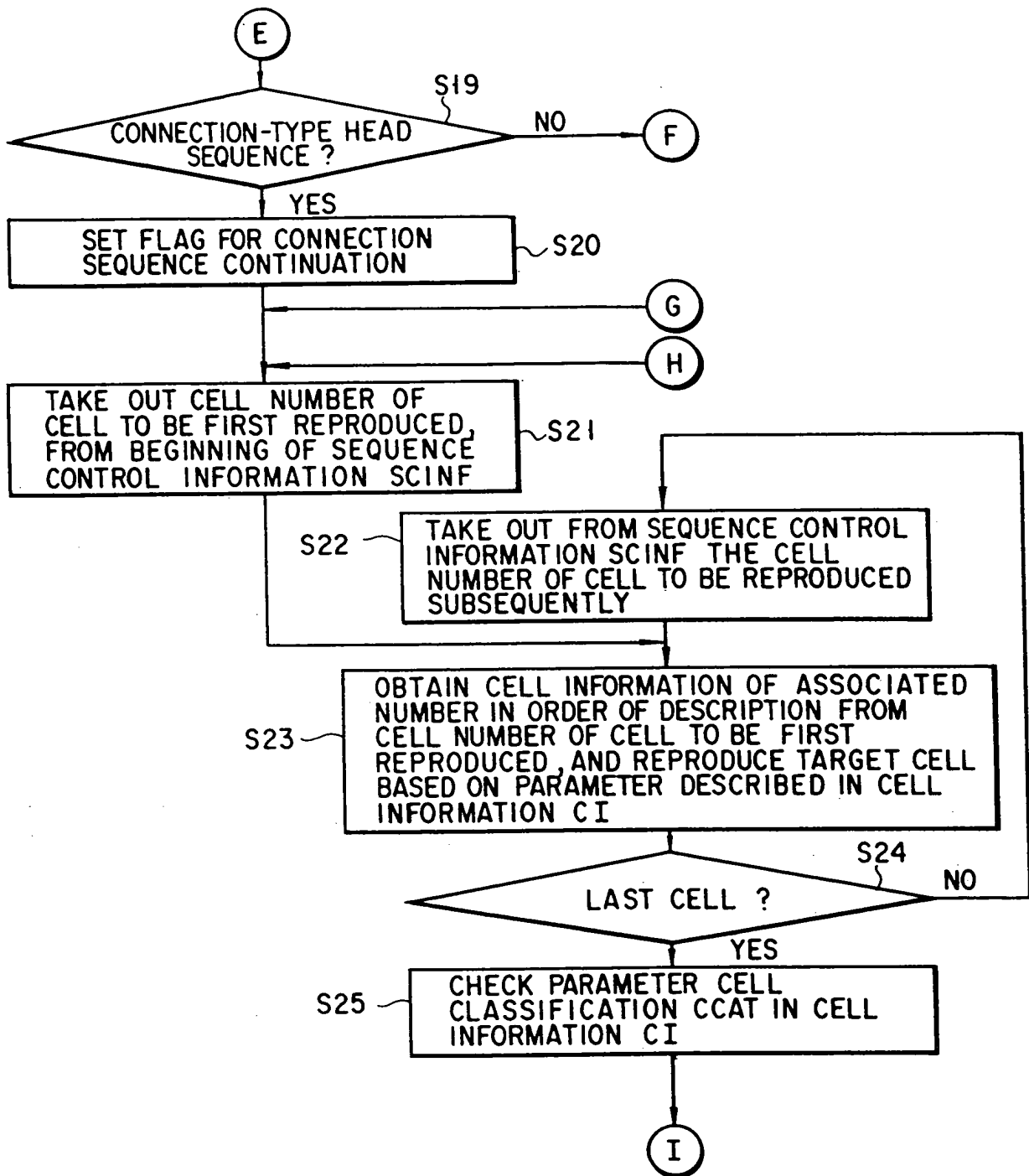
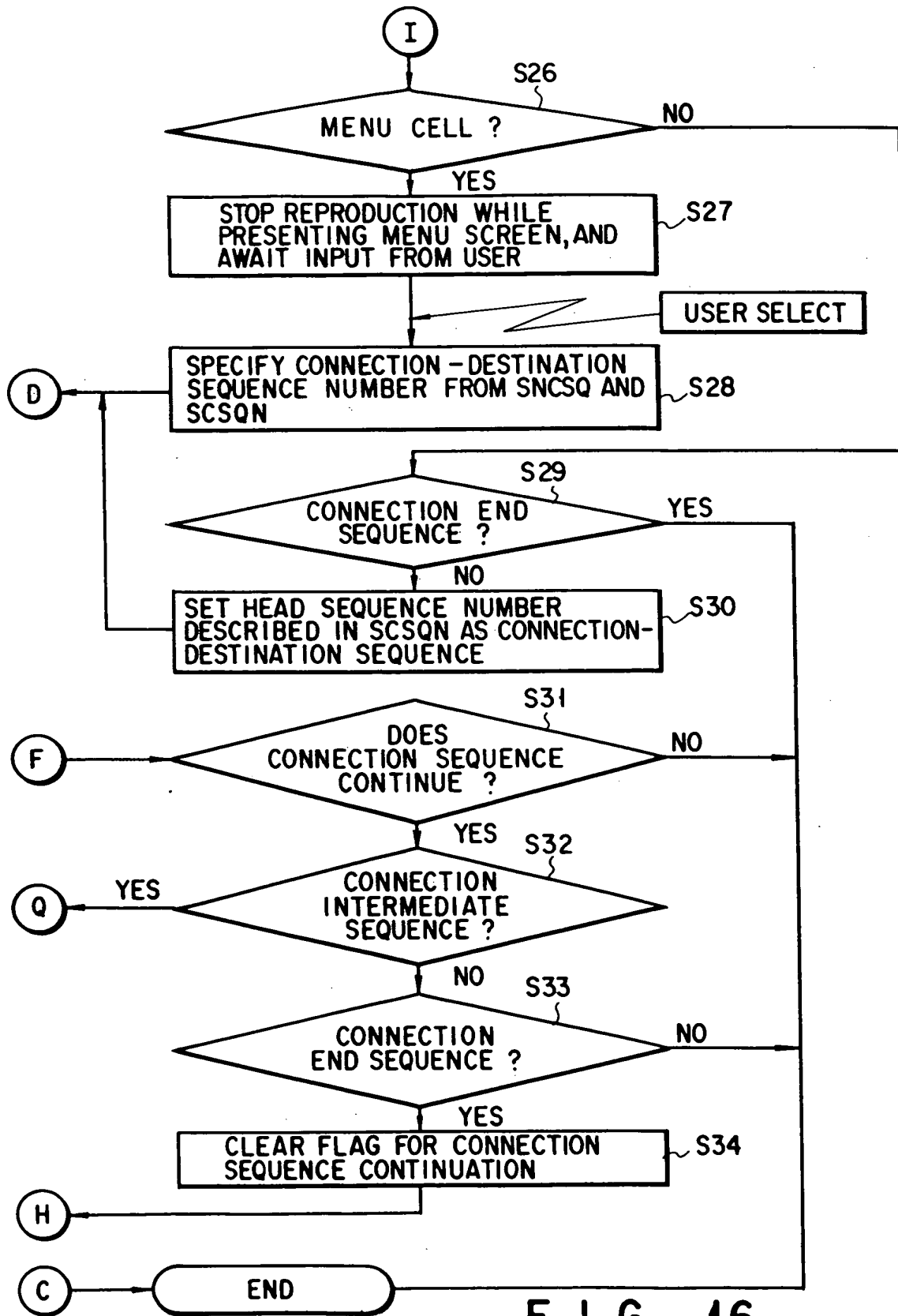


FIG. 15

[illegible]

F I G. 16

000000 21260960

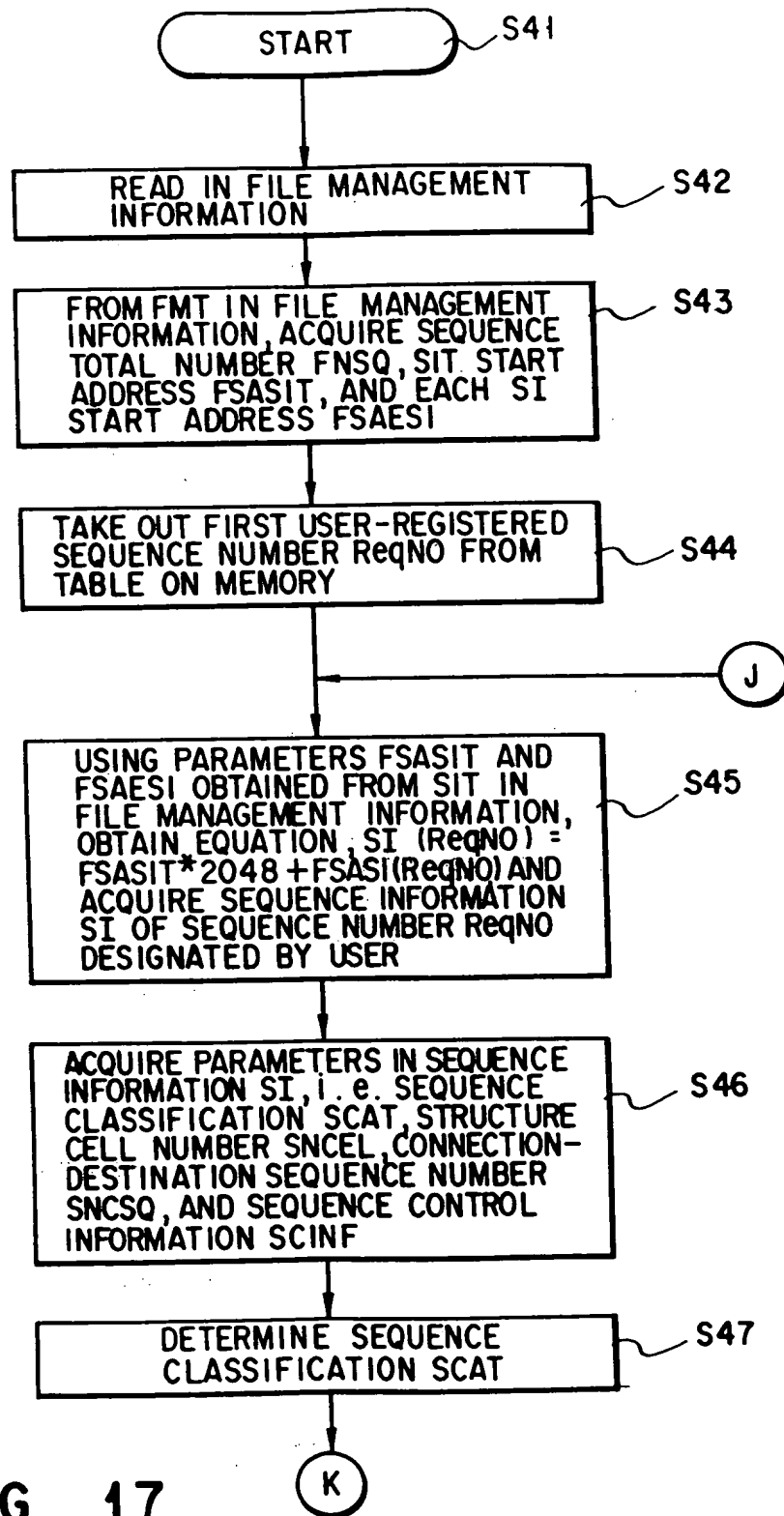


FIG. 17

```

graph TD
    K((K)) --> S48{CONNECTION-TYPE HEAD SEQUENCE ?}
    S48 -- NO --> L((L))
    S48 -- YES --> S49[SET FLAG FOR CONNECTION SEQUENCE CONTINUATION]
    S49 --> M((M))
    M --> S50[TAKE OUT CELL NUMBER OF CELL TO BE FIRST REPRODUCED, FROM BEGINNING OF SEQUENCE CONTROL INFORMATION SCINF]
    S50 --> S53[TAKE OUT FROM SEQUENCE CONTROL INFORMATION SCINF THE CELL NUMBER OF CELL TO BE REPRODUCED SUBSEQUENTLY]
    S53 --> S51[OBTAIN CELL INFORMATION OF ASSOCIATED NUMBER IN ORDER OF DESCRIPTION FROM CELL NUMBER OF CELL TO BE FIRST REPRODUCED, AND REPRODUCE TARGET CELL BASED ON PARAMETER DESCRIBED IN CELL INFORMATION CI]
    S51 --> S52{LAST CELL ?}
    S52 -- NO --> S53
    S52 -- YES --> S54[CHECK PARAMETER CELL CLASSIFICATION CCAT IN CELL INFORMATION CI]
    S54 --> S55{MENU CELL ?}
    S55 -- NO --> S53
    S55 -- YES --> S56[SKIP REPRODUCTION OF MENU SCREEN]
    S56 --> S57[TAKE OUT SUBSEQUENT USER - REGISTERED SEQUENCE NUMBER ReqNO FROM TABLE ON MEMORY]
    S57 --> N((N))
  
```

FIG. 18

F I G. 18

000250-27260960

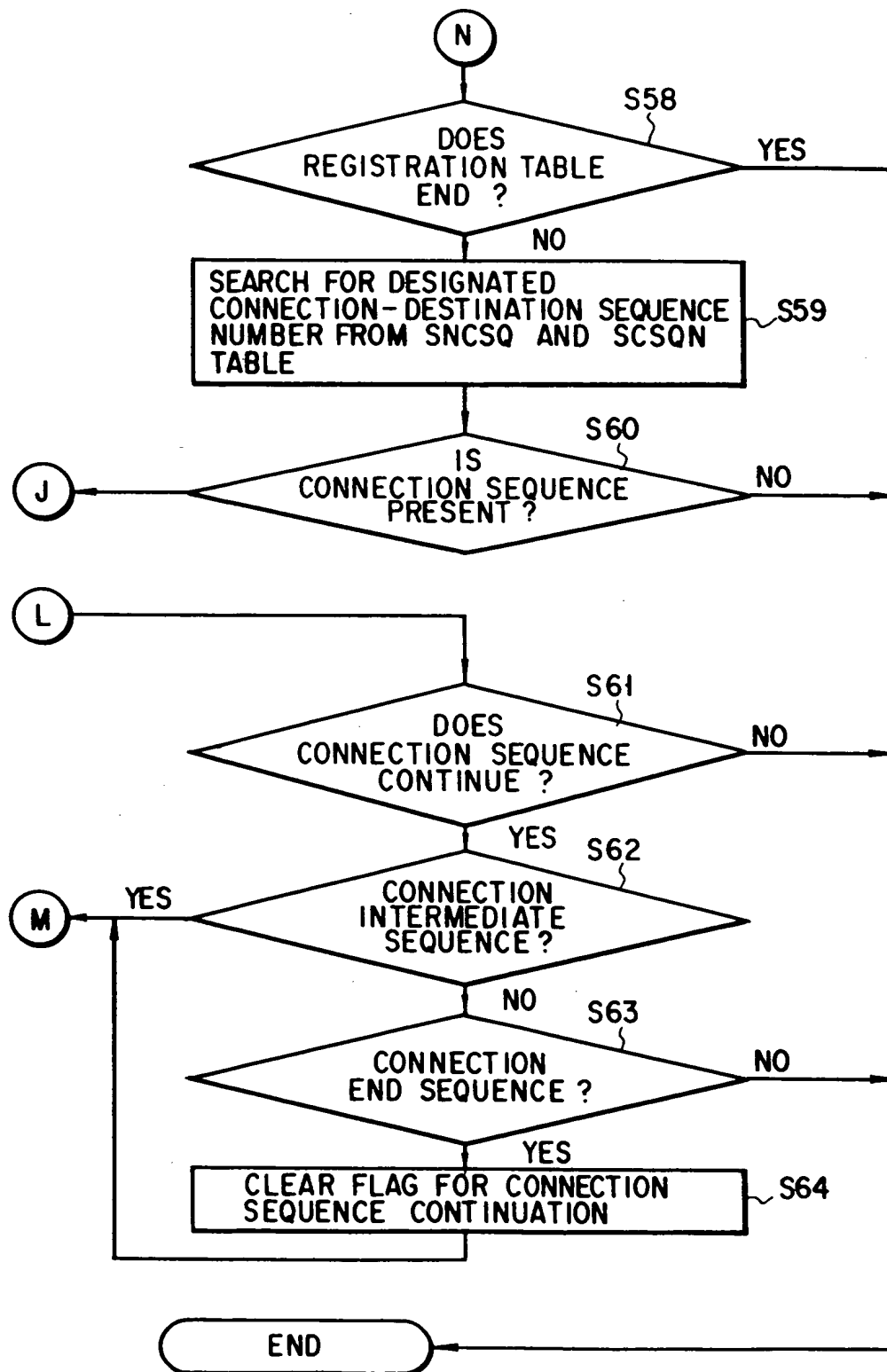


FIG. 19

VIDEO CELL
105

Sa	Sb	Sc	Sd	Se	Sf	Sg	Sh	Si	Sj	Sk	Sl	....
Cell-A Ca, La	Cell-B Cb, Lb	Cell-C Cc, Lc	Cell-D Cd, Ld	Cell-E Ce, Le	Cell-F Cf, Lf	Cell-G ...	Cell-H	Cell-I	Cell-J	Cell-K	Cell-L	...
Ta	Tb	Tc	Td	Te	Tf	Tg	Th	Ti	Tj	Tk	Tl	...

CELL INFORMATION TABLE (CIT)

PREPARE CELL
INFORMATION

#1	Cell-A
#2	Cell-B
#3	Cell-C
#4	Cell-D
#5	Cell-E
#6	Cell-F
:	:
#n	Cell-nA
#n+1	Cell-nB
#n+2	Cell-nC
:	:

SIZE :Sa, Sb, Sc, ...
TIME :Ta, Tb, Tc, ...
CLASSIFICATION :Ca, Cb, Cc, ...
LANGUAGE :La, Lb, Lc, ...

CELL
INFOR-
MATION

SEQUENCE

Seq-A	Seq-B	Seq-C
-------	-------	-------

FIG. 20

STRUCTURE NUMBER=5
FORMAT=HEARD SEQUENCE
TIME=Ta+Tb+Tc+TdT_e

STRUCTURE NUMBER=3
FORMAT=INTERMEDIATE
SEQUENCE
TIME=Tf+Tg+Th

STRUCTURE NUMBER=5
FORMAT=INTERMEDIATE
SEQUENCE
TIME=Ti+Tj+Tk+Tl

Sh	Si	Sj	Sk	Sl	....	Sna	Snb	Snc	....
Cell-H	Cell-I	Cell-J	Cell-K	Cell-L	....	Cell-A Cna, LnaCnb, LnbCnc, Lnc	Cell-B	Cell-C	....
Th	Ti	Tj	Tk	Tl		Tna	Tnb	Tnc	....

CELL INFORMATION TABLE

#1	Cell-A
#2	Cell-B
#3	Cell-C
#4	Cell-D
#5	Cell-E
#6	Cell-F
⋮	⋮
#n	Cell-nA
#n+1	Cell-nB
#n+2	Cell-nC
⋮	⋮

PREPARE CELL
INFORMATION #n

Seq-C	Seq-n
-------	------	-------	------

STRUCTURE NUMBER=4
FORMAT=INTERMEDIATE
SEQUENCE
TIME=Tl+Tj+Tk+Tl

STRUCTURE NUMBER=3
FORMAT=END SEQUENCE
TIME=Tna+Tnb+Tnc

CELL REPRODUCTION ORDER
LIST OF Seq-A

#1	CeINO#1
#2	CeINO#2
#3	CeINO#3
#4	CeINO#4
#5	CeINO#5

F I G. 22A

CELL REPRODUCTION ORDER
LIST OF Seq-B

#1	CeINO#6
#2	CeINO#7
#3	CeINO#8

F I G. 22B

CELL REPRODUCTION ORDER
LIST OF Seq-C

#1	CeINO#9
#2	CeINO#10
#3	CeINO#11
#4	CeINO#12

F I G. 22C

CELL REPRODUCTION ORDER
LIST OF Seq-n

#1	CeINO#n
#2	CeINO#n+1
#3	CeINO#n+2

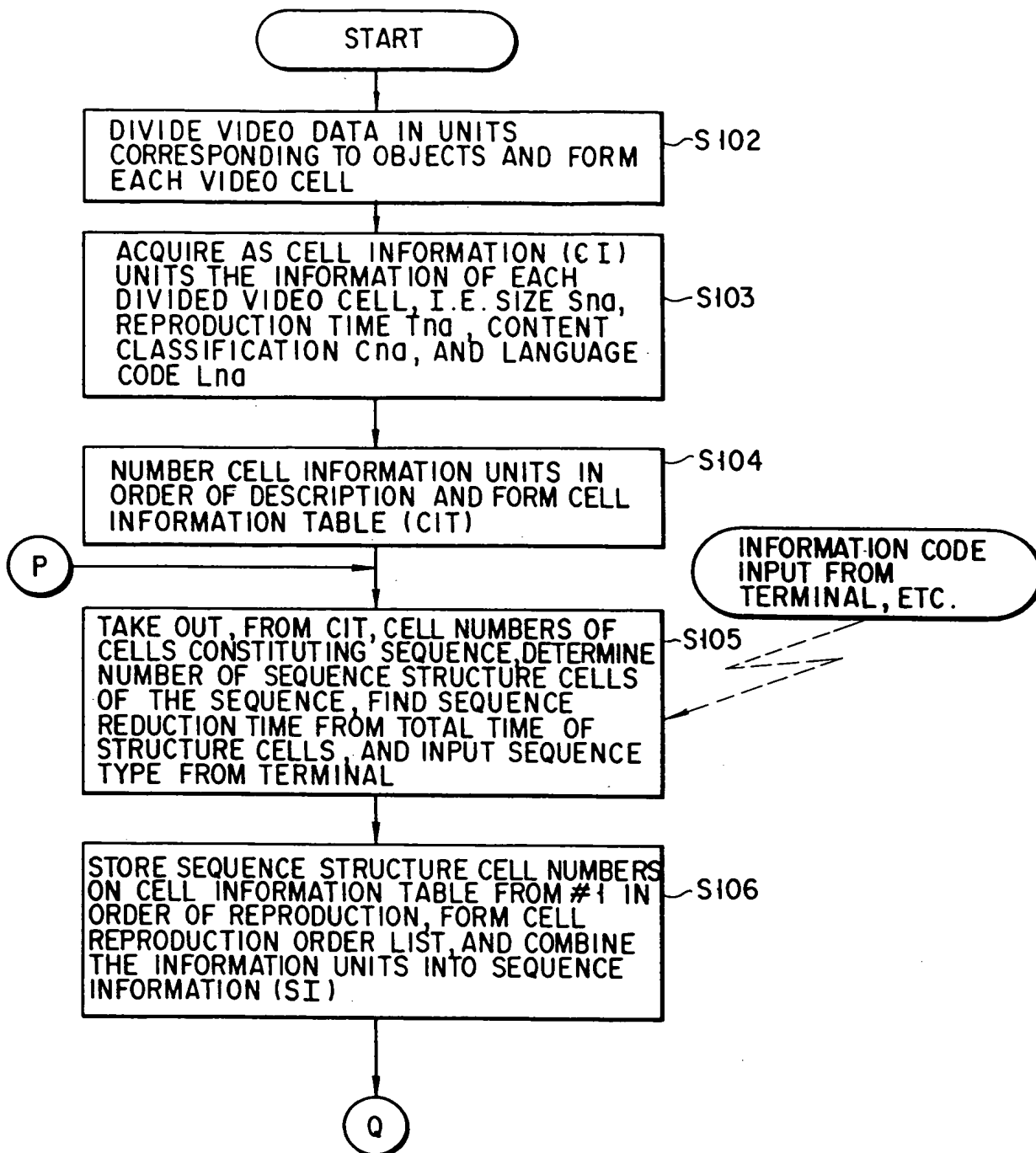
F I G. 22D

```

graph TD
    START([START]) --> S90[DIVIDE VIDEO DATA IN UNITS  
CORRESPONDING TO OBJECTS AND FORM  
EACH VIDEO CELL]
    S90 --> S92[ACQUIRE AS CELL INFORMATION (CI)  
UNITS THE INFORMATION OF EACH  
DIVIDED VIDEO CELL, I.E. SIZE Sna,  
REPRODUCTION TIME Tna, CONTENT  
CLASSIFICATION Cna, AND LANGUAGE  
CODE Lna]
    S92 --> S93[NUMBER CELL INFORMATION UNITS IN  
ORDER OF DESCRIPTION AND FORM CELL  
INFORMATION TABLE (CIT)]
    S93 --> S94[TAKE OUT, FROM CIT, CELL NUMBERS OF  
CELLS CONSTITUTING SEQUENCE, DETERMINE  
NUMBER OF SEQUENCE STRUCTURE CELLS  
OF THE SEQUENCE, FIND SEQUENCE  
REDUCTION TIME FROM TOTAL TIME OF  
STRUCTURE CELLS, AND INPUT SEQUENCE  
TYPE FROM TERMINAL]
    S94 -.-> INFO([INFORMATION CODE  
INPUT FROM  
TERMINAL, ETC.])
    S94 --> S95[STORE SEQUENCE STRUCTURE CELL NUMBERS  
ON CELL INFORMATION TABLE FROM #1 IN  
ORDER OF REPRODUCTION, FORM CELL  
REPRODUCTION ORDER LIST, AND COMBINE  
THE INFORMATION UNITS INTO SEQUENCE  
INFORMATION (SI)]
    S95 --> S96{WILL  
NEXT SEQUENCE BE FORMED  
?}
    S96 -- YES --> S94
    S96 -- NO --> S97[ASSIGN NUMBERS TO SEQUENCE INFORMATION  
UNITS IN ORDER OF DESCRIPTION AND THE  
NUMBERED SEQUENCE INFORMATION UNITS  
ON SEQUENCE INFORMATION TABLE (SIT)]
    S97 --> END([END])

```

F I G. 23

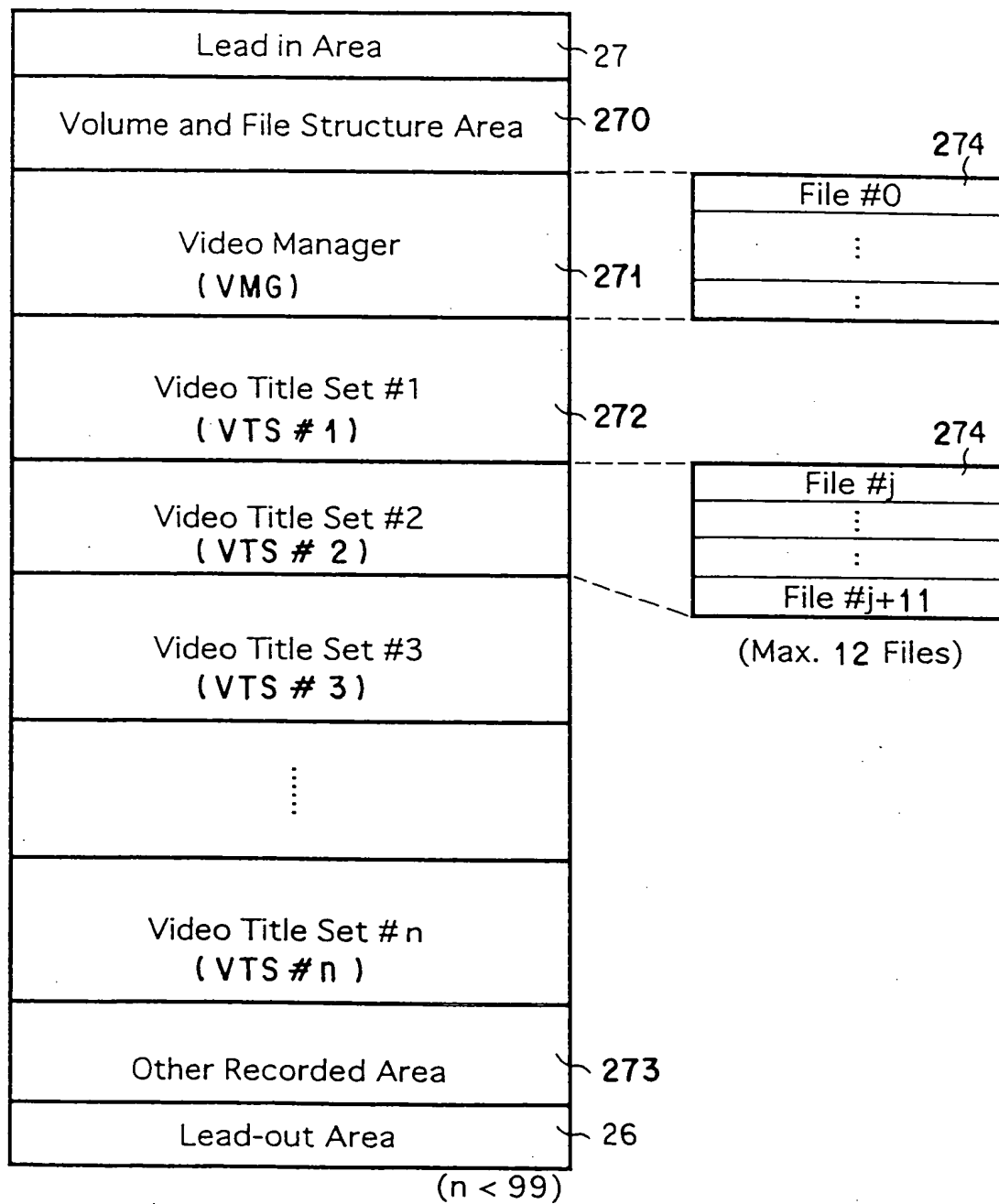
[illegible]

F I G. 24

```

graph TD
    Q((Q)) --> S107[INPUT FROM TERMINAL THE NUMBER OF DIRECT CONNECTION SEQUENCES]
    S107 --> S108{IS NUMBER OF CONNECTION SEQUENCES ZERO ?}
    S108 -- YES --> S109[INPUT FROM TERMINAL CONNECTION-DESTINATION SEQUENCE NUMBERS ASSOCIATED WITH CONNECTION SEQUENCES, THUS FORMING CONNECTION-DESTINATION SEQUENCE INFORMATION]
    S108 -- NO --> S109
    S109 --> S110[ADD NUMBER OF CONNECTION SEQUENCES AND CONNECTION-DESTINATION SEQUENCE INFORMATION TO SEQUENCE INFORMATION (SI)]
    S110 --> S111{WILL NEXT SEQUENCE BE FORMED ?}
    S111 -- YES --> P((P))
    S111 -- NO --> S112[ASSIGN NUMBERS TO SEQUENCE INFORMATION UNITS IN ORDER OF DESCRIPTION AND THE NUMBERED SEQUENCE INFORMATION UNITS ON SEQUENCE INFORMATION TABLL (SIT)]
    S112 --> END([END])
    INFO([INFORMATION CODE INPUT FROM TERMINAL, ETC]) -.-> S109
  
```

F I G. 25



F I G. 26

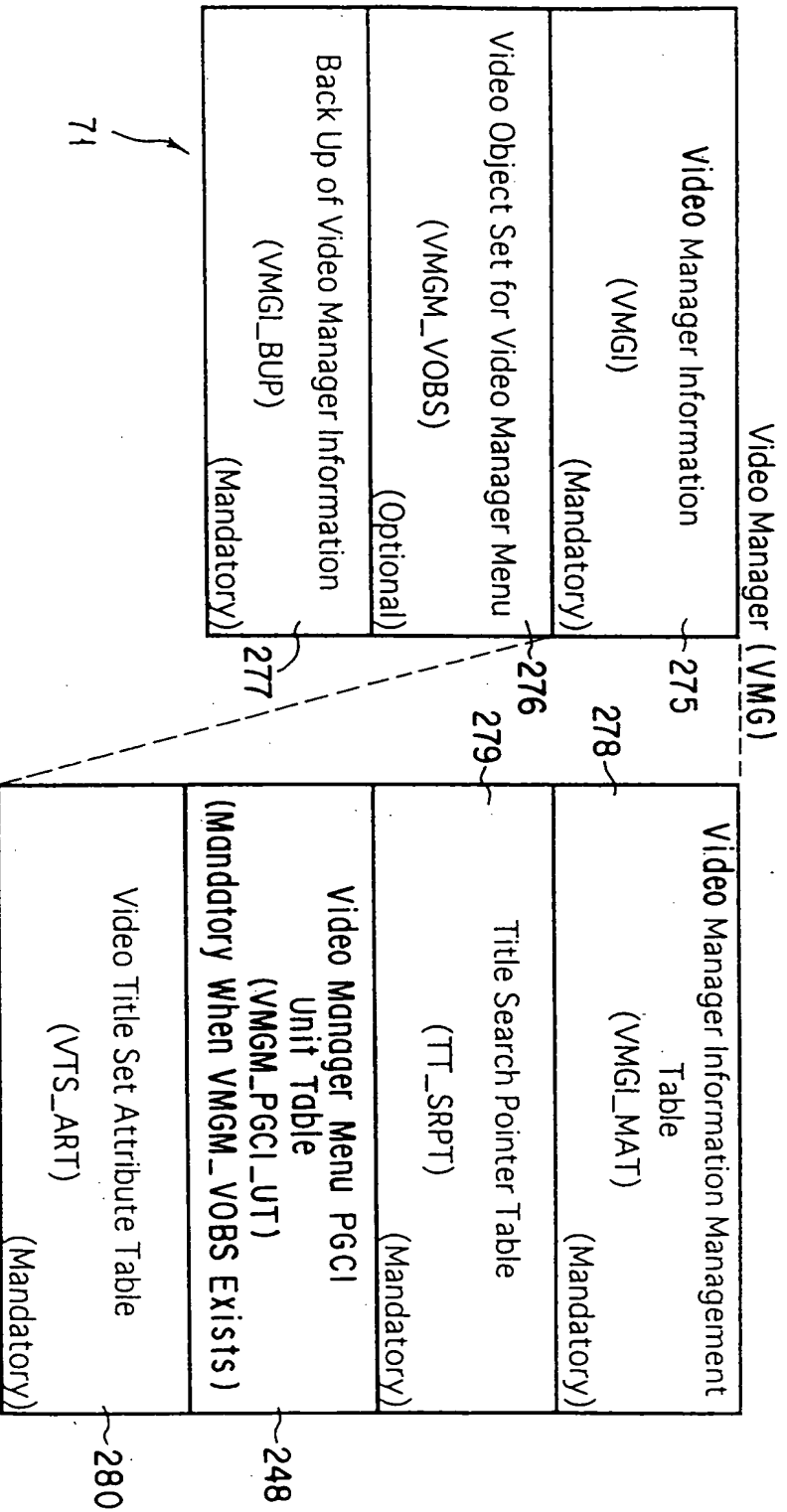
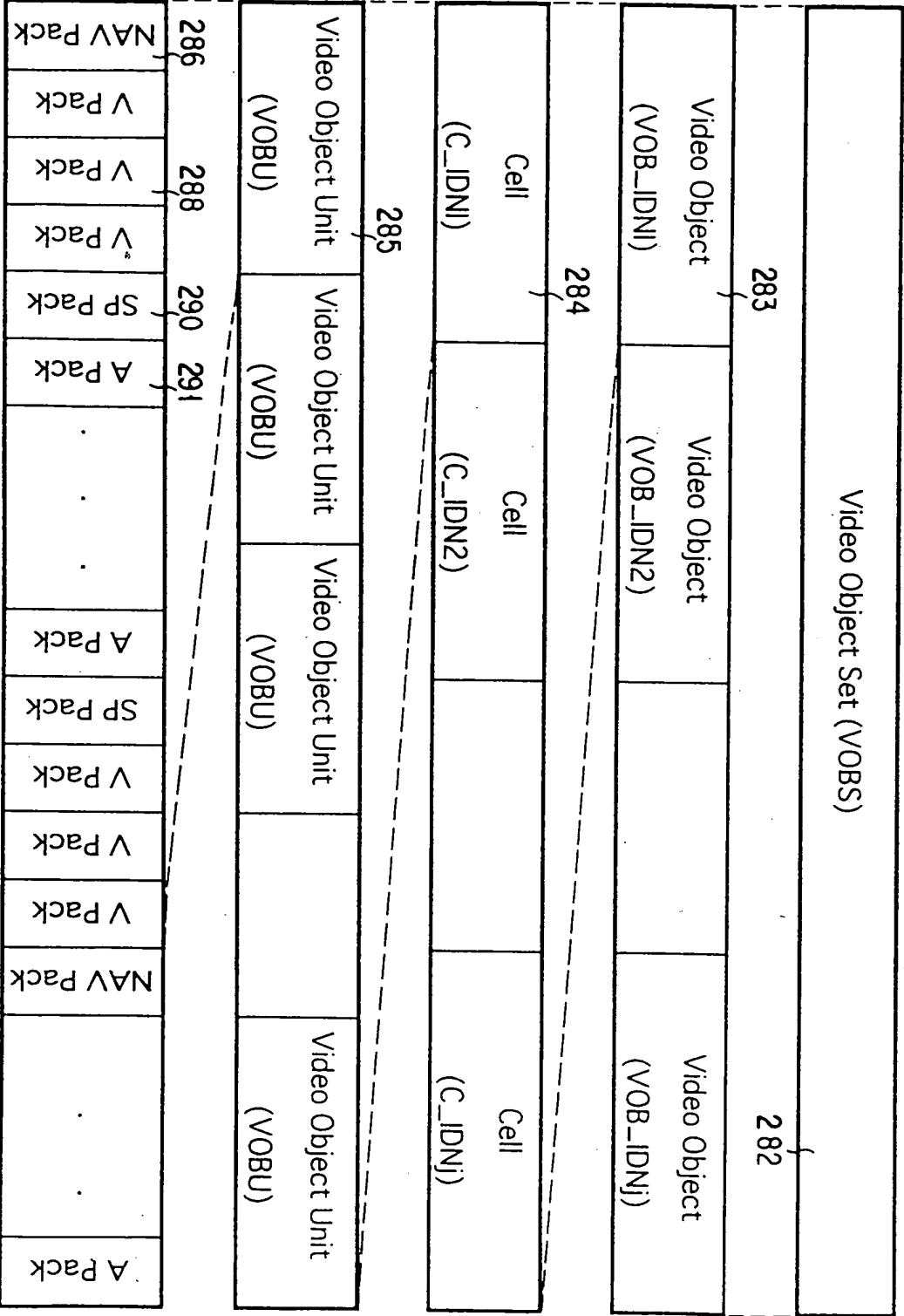


FIG. 27



F I G. 28

09609247 063000

VMGLMAT

Content

(Description order)

VMG_ID	Video Manager Identifier
VMGI_SZ	Size of Video Manager Information
VERN	Version Number of DVD Video Specification
VMG_CAT	Video Manager Category
VLMS_ID	Volume Set Identifier
VTs_Ns	Number of Video Title Set
PVR_ID	Provider Unique ID
VMGI_MAT_EA	End Address of VMGI_MAT
VMGM_VOBS_SA	Video Manager Menu Video Object Set Start Address
TT_SRPT_SA	Start Address of TT_SRPT
VMGM_PGCI_UT_SA	Start Address of VMGM_PGCI_UT
VTs_ATTR_SA	Start Address of VTs_ATTR
VMGM_V_ATTR	Video Attribute of VMGM
VMGM_AST_Ns	Number of Audio Stream of VMGM
VMGM_AST_ATTR	Audio Stream Attribute of VMGM
VMGM_SPST_Ns	Number of Sub-picture Stream of VMGM
VMGM_SPST_ATTR	Sub-picture Stream Attribute of VMGM

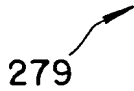
[illegible]

FIG. 31

FIG. 32

TT_SRP	(Description order)
	Contents
VTSN	Video Title Set Number
PTT_Ns	Number of Part of Title
VTSN	VTS Number
VTS_TTN	VTS Title Number
VTS_SA	Start Address of Video Title Set

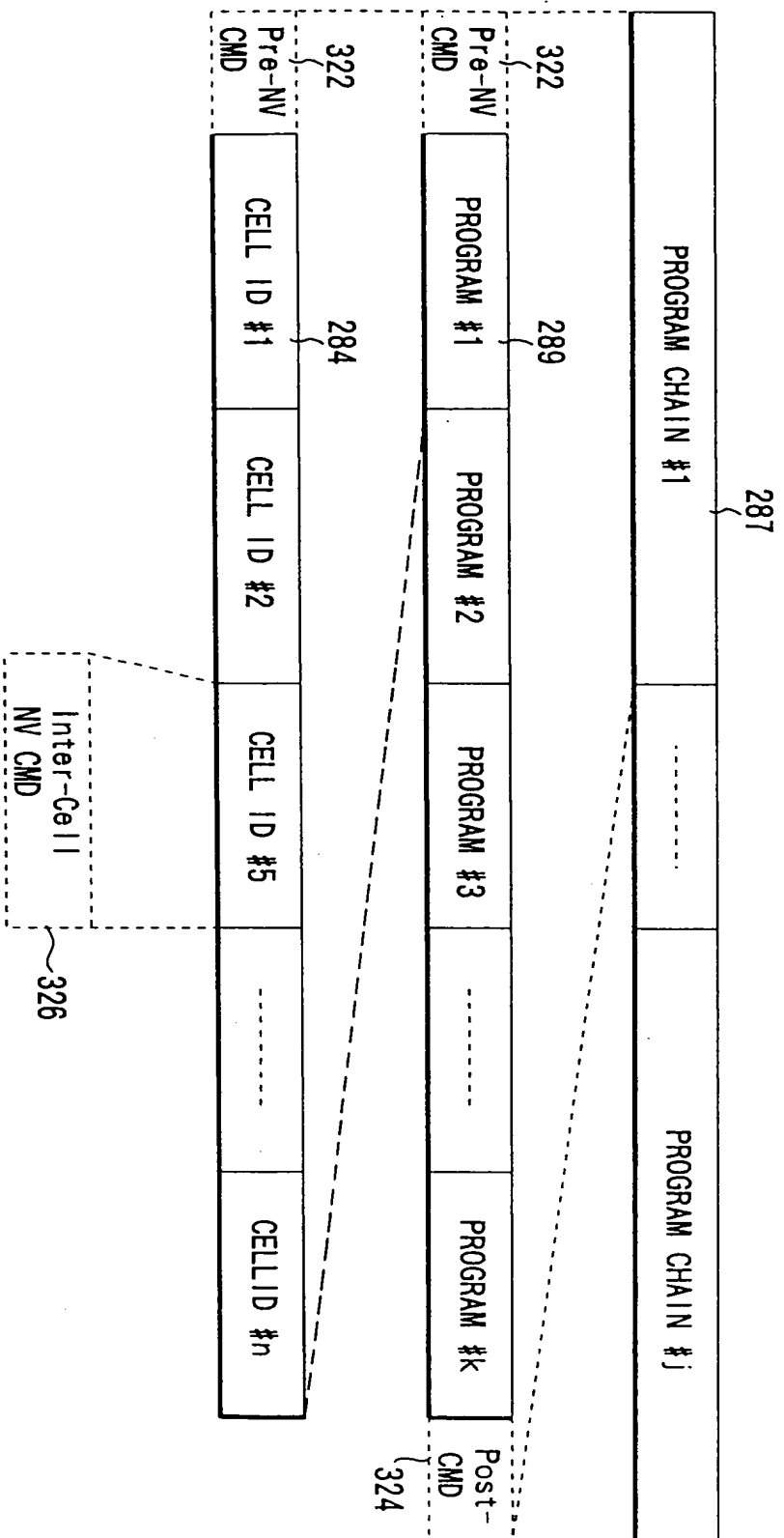
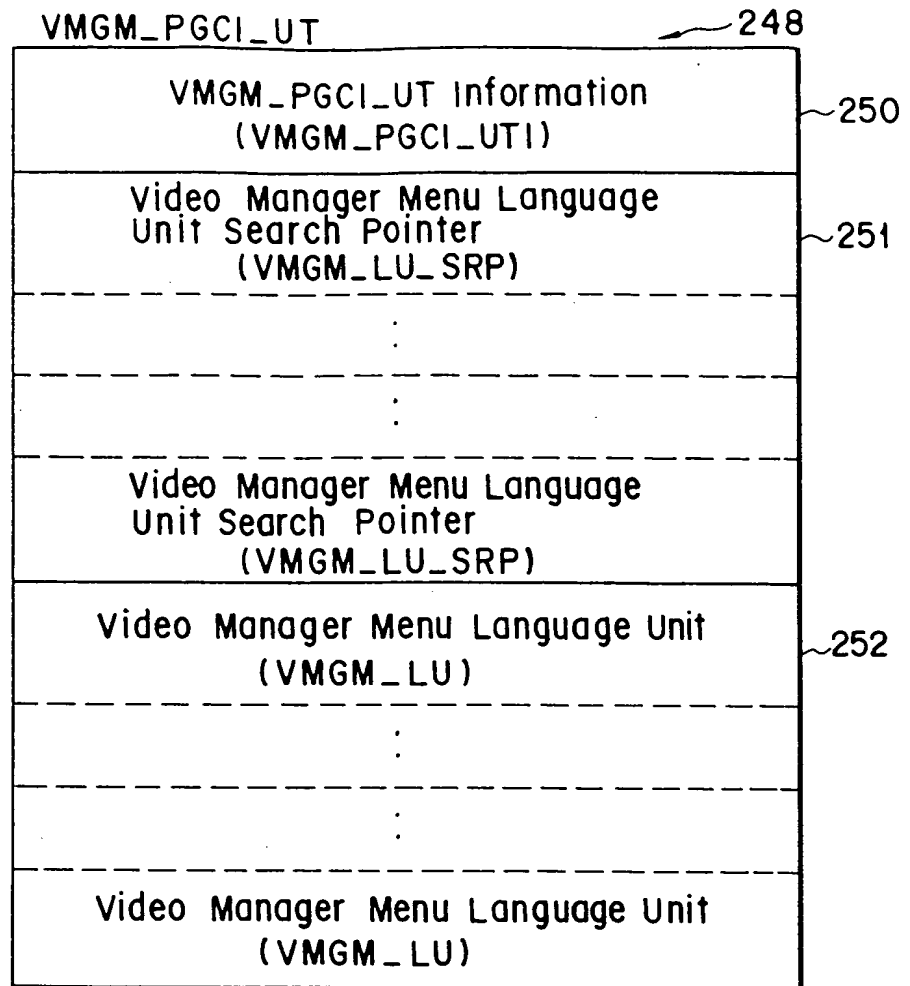


FIG. 33

FIG. 34



VMGM_PGCI_UTI	
	Contents
VMGM_LU_Ns	Number of Video Maneger Menu Language Units
VMGM_PGCI_UT_EA	End Address of VMGM_PGCI_UT

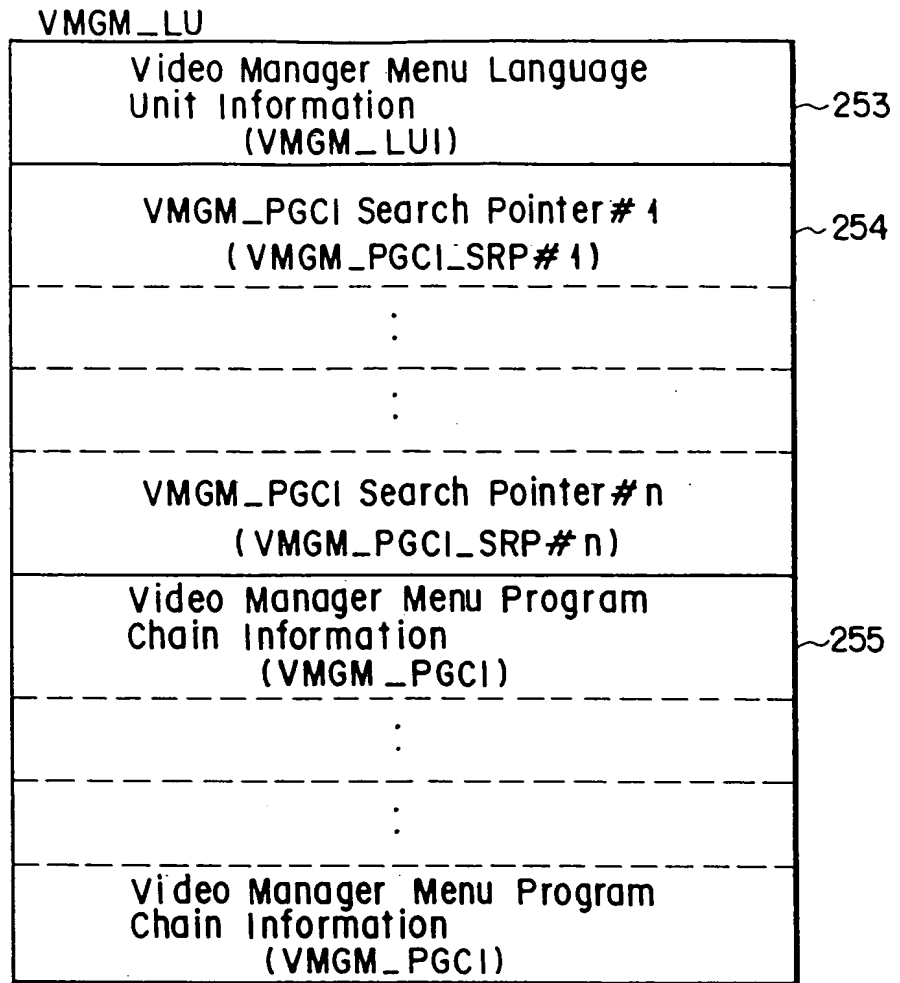
FIG. 35

VMGM_LU_SRP	
	Contents
VMGM_LCD	Video Manager Menu Language Code
VMGM_LU_SA	Start Address of VMGM_LU

FIG. 36

000250 21260960

FIG. 37



VMGM_LUI	
	Contents
VMGM_PGCI_Ns	Number of VMGM_PGCIs
VMGM_LUI_EA	End Address of VMGM_LUI

FIG. 38

VMGM_PGCI_SRP	
	Contents
VMGM_PGC_CAT	VMGM_PGC Category
VMGM_PGCI_SA	Start Address of VMGM_PGCI

FIG. 39

VTS_ATRT

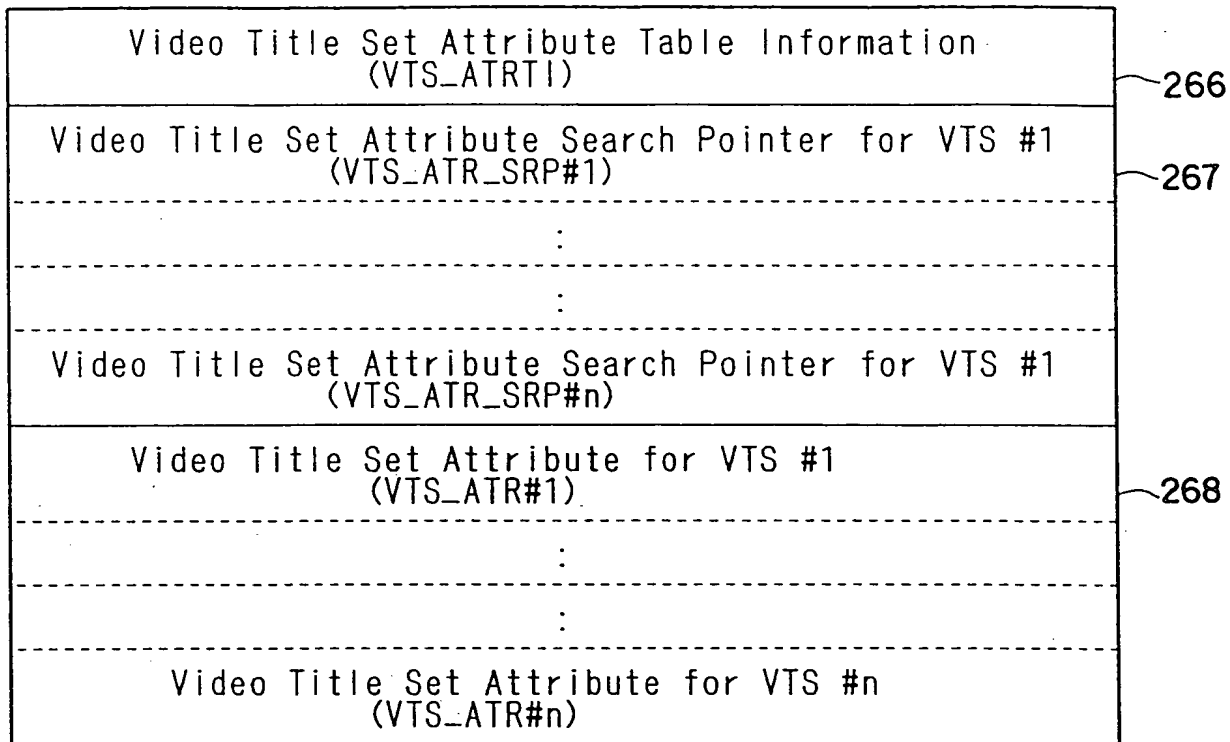


FIG. 40

VTS_ATRTI	
	Contents
VTS_Ns	Number of VTSS
VTS_ATRT_EA	End Address of VTS_ATRT

FIG. 41

VTS_ATR_SRP	
	Contents
(1)VTS_ATR_SA	Start Address of VTS_ATR

FIG. 42

VTS_ATR	
	Contents
VTS_ATR_EA	End Address of VTS_ATR
VTS_CAT	Video Title Set Category
VTS_ATRI	Video Title Set Attribute Information

FIG. 43

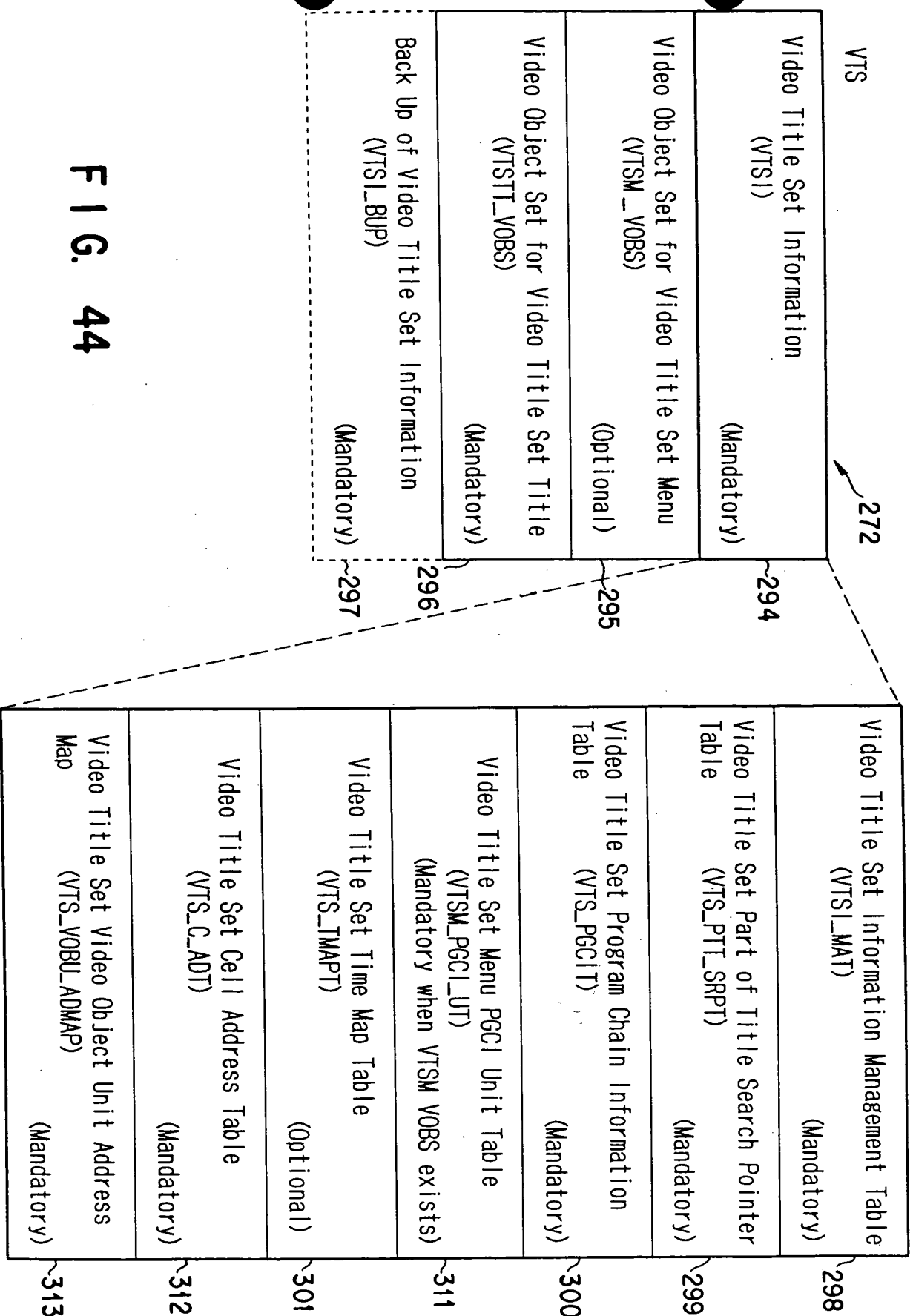


FIG. 44

VTS_PTT_SRPT

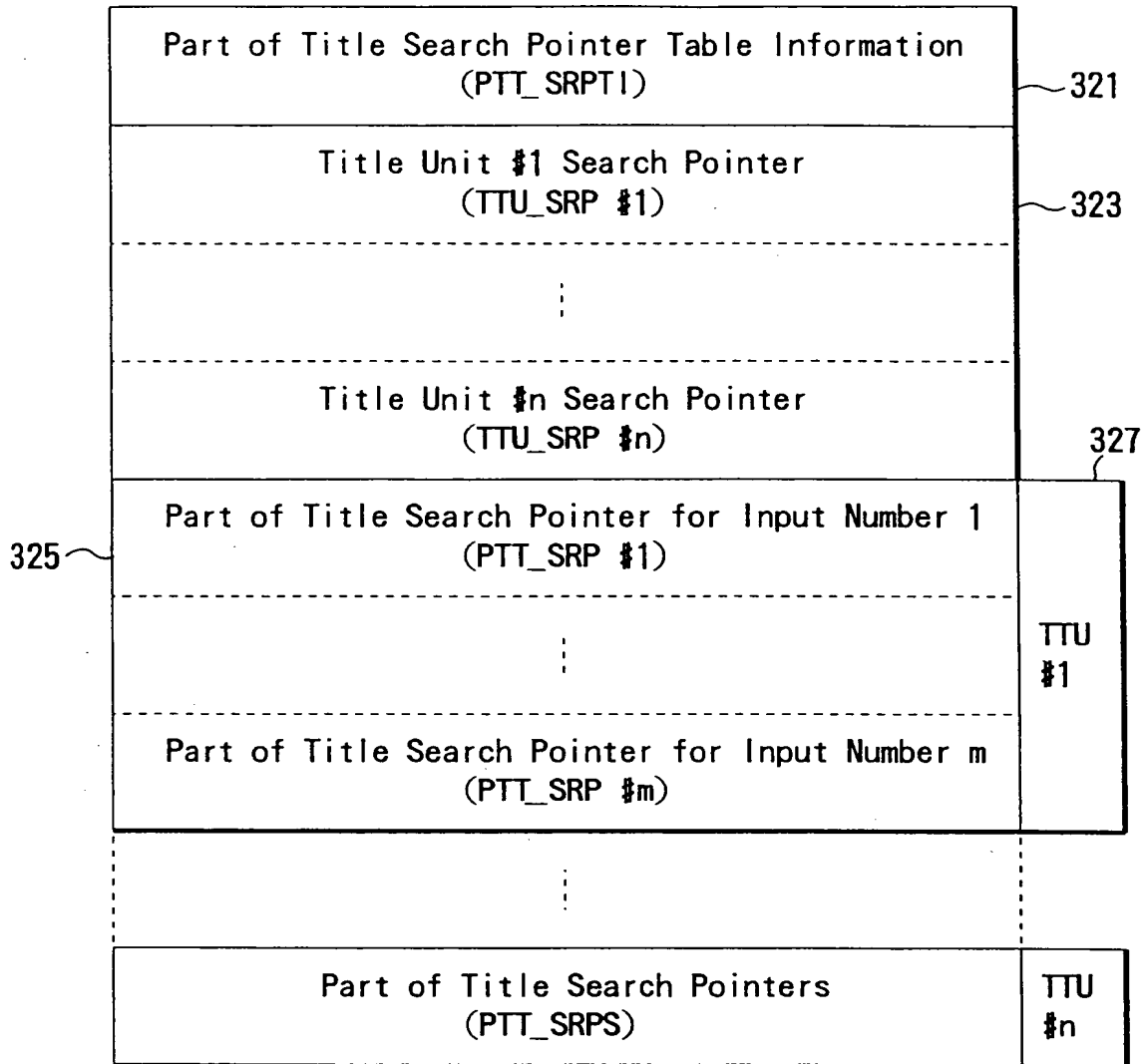


FIG. 46

FIG. 47

PTT_SRPTI	
	Contents
VTS_TTU_Ns	Number of TTU in VTS
VTS_PTT_SRPT EA	End Address of VTS PTT SRPT

FIG. 48

TTU_SRP	
	Contents
(1)TTU_SA	Start Address of TTU

FIG. 49

PTT_SRP	
	Contents
PGC_N	Program Chain Number
PG_N	Program Number

VTS_PGCIT

Video Title Set Program Chain Information Table Information (VTS_PGCIT_I)	302
VTS_PGCI #1 Search Pointer (VTS_PGCIT_SRP#1)	303
VTS_PGCI #2 Search Pointer (VTS_PGCIT_SRP#2)	
:	
VTS_PGCI #n Search Pointer (VTS_PGCIT_SRP#n)	
VTS_PGCI #1 (VTS_PGCI 1)	304
:	
VTS_PGCI #n (VTS_PGCI n)	

300

F I G. 50

B

	Content
VTs_PGC_Ns	Number of VTs_PGCs
VTs_PGCIIT_EA	End Address of VTs_PGCIIT

VTSPGCITSRP

	Content
VTS_PGC_CAT	Video Title Set PGC category
VTS_PGCI_SA	Start Address of VTS_PGC Information

VTS_PGC I



PGC_GI

	Contents
PGC_CAT	PGC Category
PGC_CNT	PGC Contents
PGC_PB_TM	PGC Playback Time
PGC_UOP_CTL	PGC User Operation Control
PGC_SPST_CTL	PGC Sub-picture Stream Control
PGC_AST_CTL	PGC Audio Stream Control
PGC_NV_CTL	PGC Navigation Control
PGC_SP_PLT	PGC Sub-picture Palette
PGC_NV_CMDT_SA	Start Address of PGC_NV_CMDT
PGC_PGMAP_SA	Start Address of PGC_PGMAP
C_PBIT_SA	Start Address of C_PBIT
C_POSIT_SA	Start Address of C_POSIT

FIG. 54

00000000000000000000000000000000

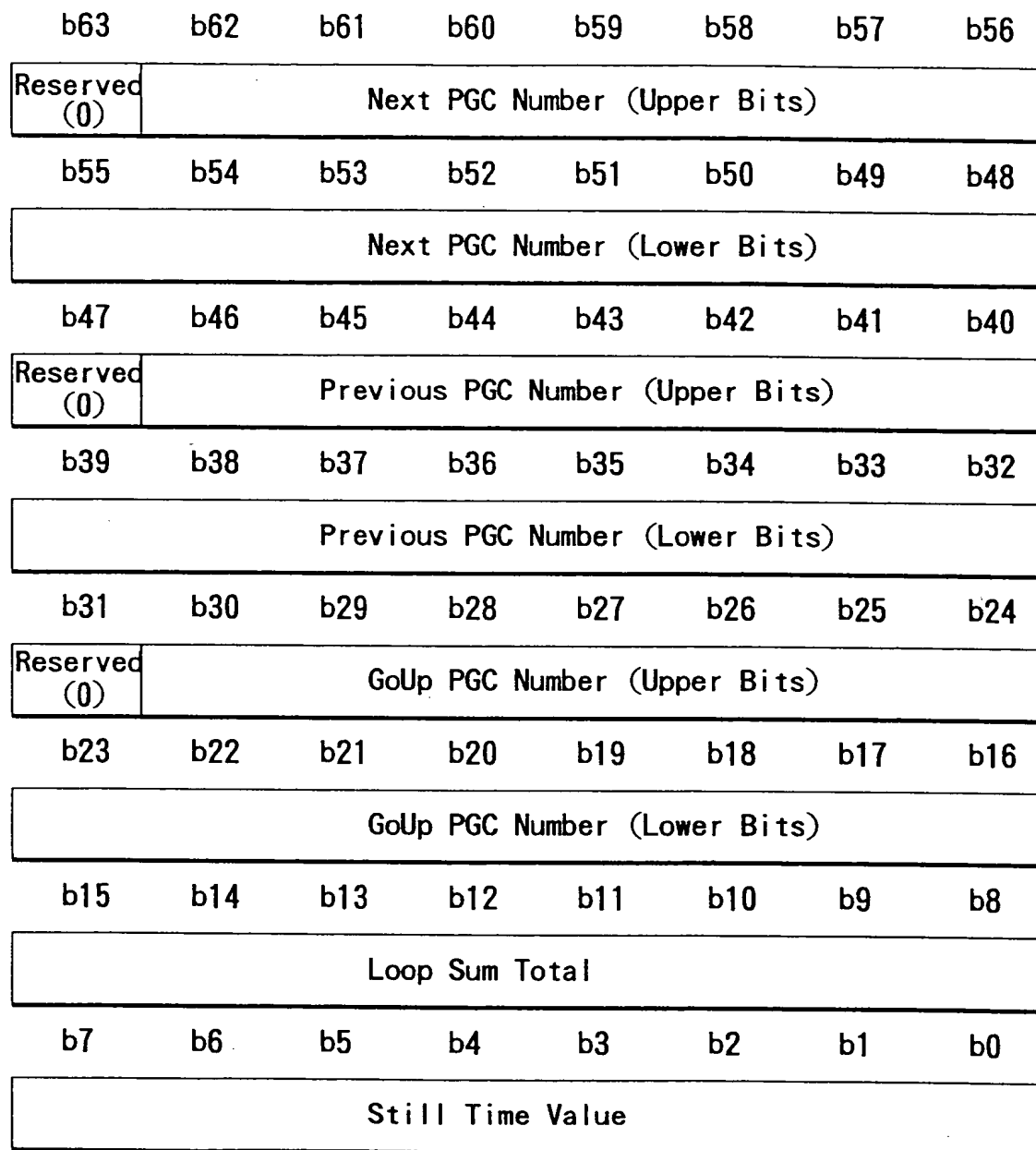


FIG. 55

- 309

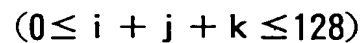


FIG. 56

PGC_NV_CMDT1	
	Contents
(1) PRE_NV_CMD_SA	Start Address of PRE NV CMD
(2) POST_NV_CMD_SA	Start Address of POST NV CMD
(3) IC_NV_CMD_SA	Start Address of IC NV CMD

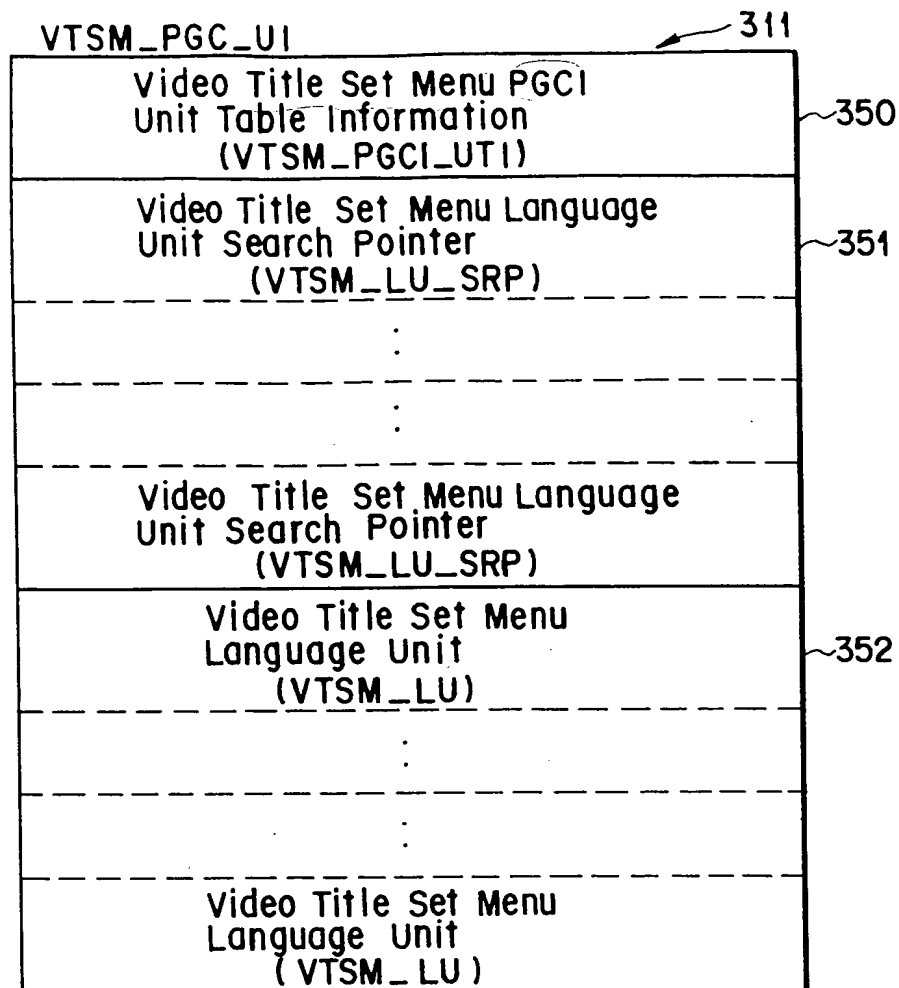
FIG. 57

[illegible]FIG. 63FIG. 64

FIG. 65

FIG. 66

FIG. 67



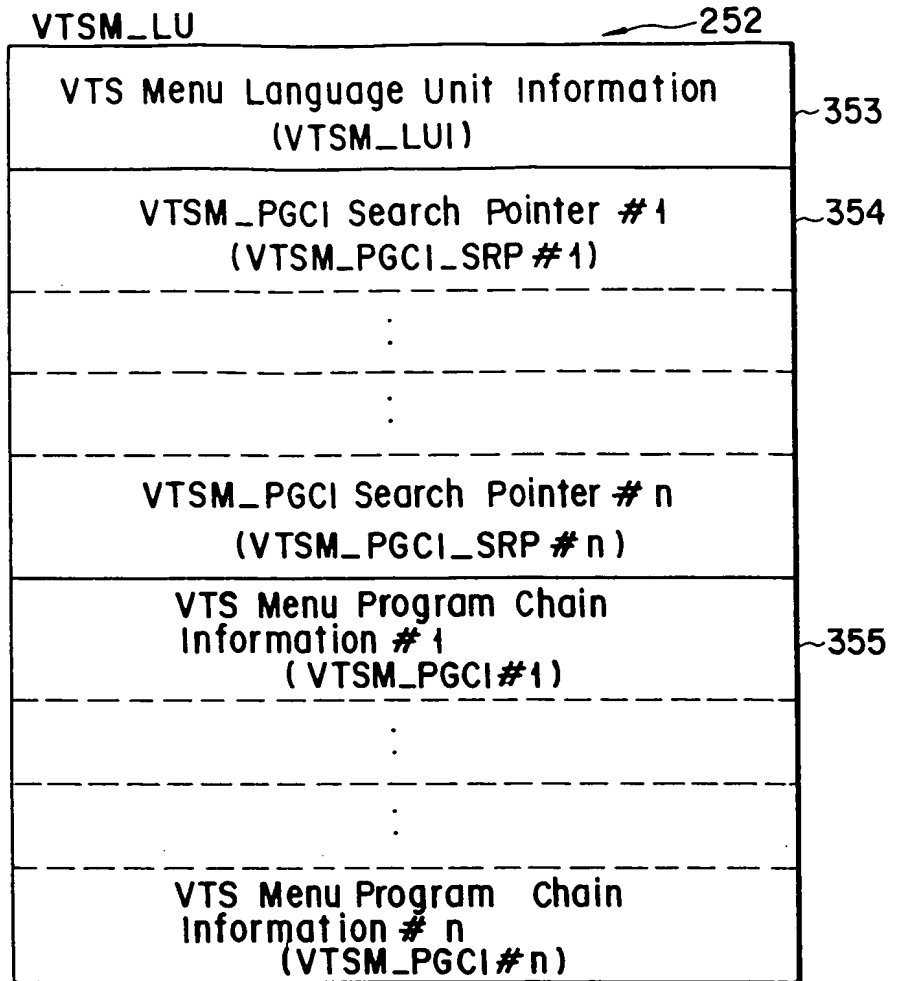
VTSM_PGCI_UTI	
	Contents
VTSM_LU_Ns	Number of Video Title Set Menu Language Units
VTSM_PGCI_UT_EA	End Address of VTSM_PGCI_UT

FIG. 68

VTSM_LU_SRP	
	Contents
VTSM_LCD	Video Title Set Menu Language Code
VTSM_LU_SA	Start Address of VTSM_LU

FIG. 69

FIG. 70



VTSM_LUI	
	Contents
VTSM_PGC_Ns	Number of VTSM_PGCs
VTSM_LU_EA	End Address of VTSM_LU

FIG. 71

VTSM_PGCI _ SRP	
	Contents
VTSM_PGC_CAT	VTSM_PGC category
VTSM_PGCI_SA	Start Address of VTSM_PGCI

FIG. 72

FIG. 73

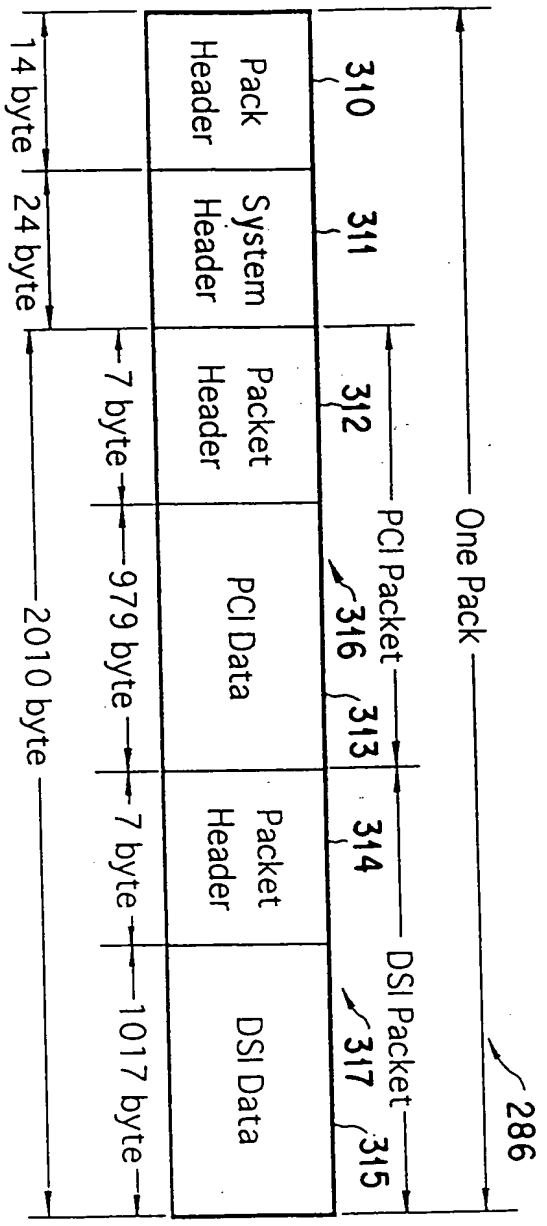
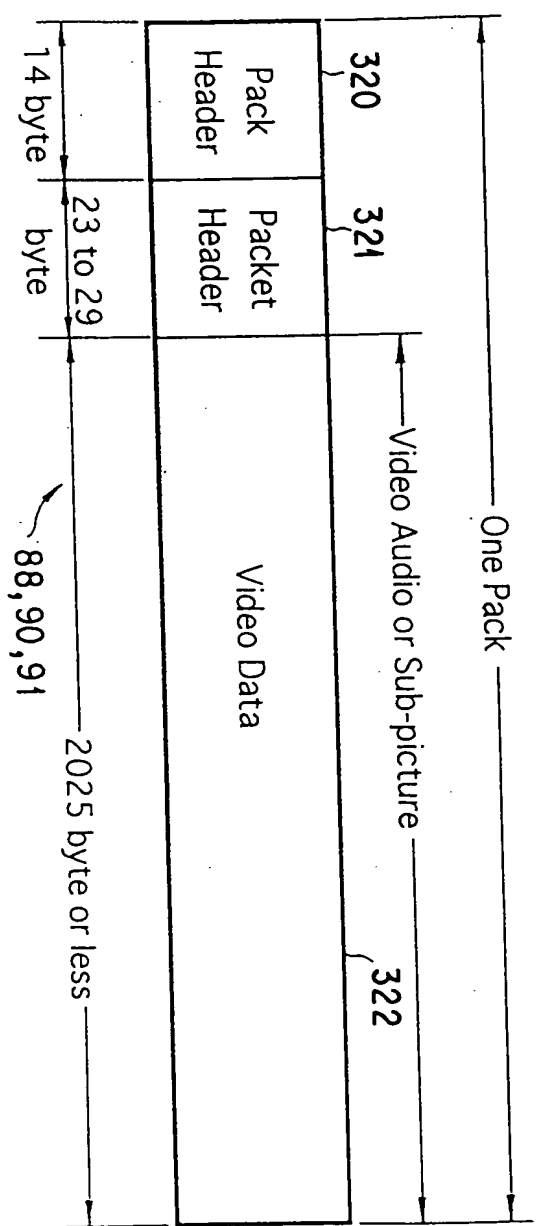


FIG. 74



PC 1

PCI	Content
PCI_GI	PCI General Information
NSMLS-ANGL	Angle Information

FIG. 76

PC1_G1

	Content
NV_PCK_LBN	LBN of NV Pack
VOBU_CAT	Category of VOBUs
VOBU_S_PTM	Start PTM of VOBUs
VOBU_E_PTM	End PTM of VOBUs

DS I

DSI	Content
DSI_GI	DSI General Information
SML_PBI	Seamless Playback Information
SML_AGLI	Angle Information
NV_PCK_ADI	Navigation Pack Address Information
SYNCl	Synchronous Playback Information

FIG. 77

DSI_GI

	Content
NV_PCK_SCR	SCR of NV Pack
NV_PCK_LBN	LBN of NV Pack
VOBU_EA	VOBU End Address
VOBU_IP_EA	First I-picture End Address
VOBU_VOB_IDN	VOB ID Number
VOBU_C_IDN	Cell ID Number

FIG. 78

SYNCI

	Content
A_SYNCA 0 to 7	Target Audio Pack Address
SP_SYNCA 0 to 31	VOBU Start Address of Target SP pack

FIG. 79

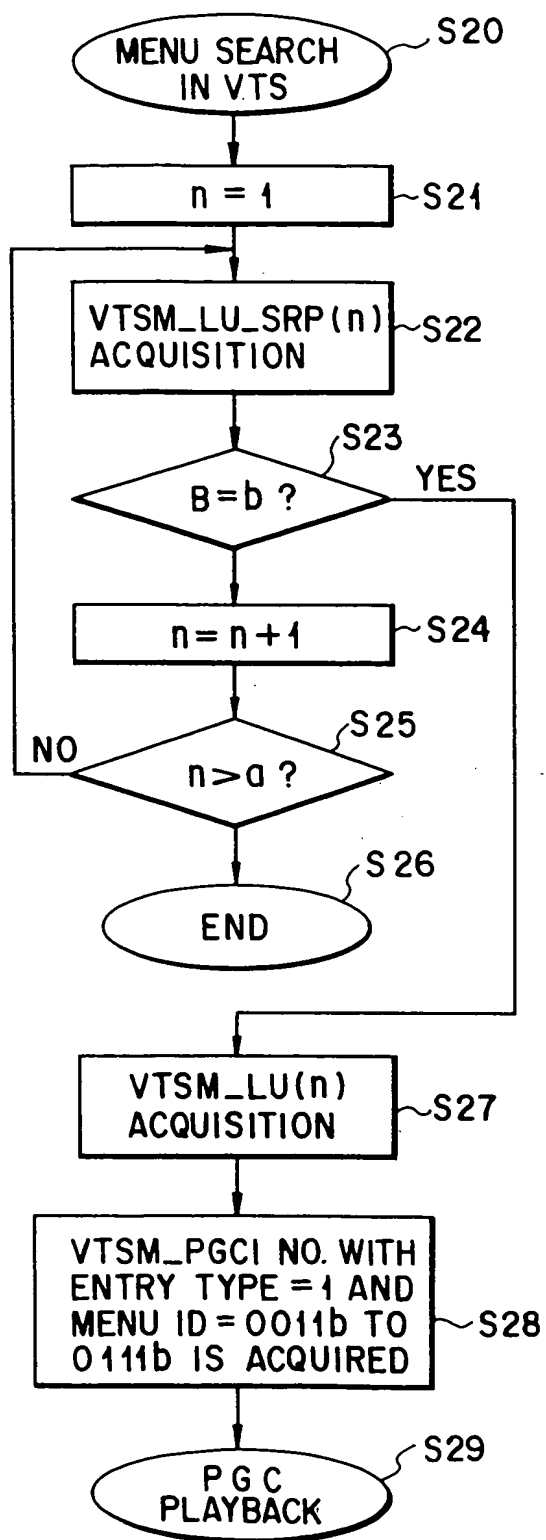
```

graph TD
    241([START]) --> 242[ACQUIRE VMGI]
    242 --> 243[ACQUIRE START ADDRESS OF EACH TABLE FROM VMGI_MAT]
    243 --> 244{IS USER INPUT PRESENT?}
    244 -- YES --> 247[DISPLAY MENU FOR SELECTION (REFER TO LANGUAGES HELD IN PLAYER)]
    244 -- NO --> 245{IS VMGM_VOBS OF MENU DATA PRESENT?}
    245 -- YES --> 246[ACQUIRE AND SET ATTRIBUTE INFORMATION ON MAIN VIDEO, AUDIO, AND SUB-PICTURE OF VMGM]
    245 -- NO --> 247
    246 --> 247
    247 --> 248[ACQUIRE VTS NUMBER, TITLE NUMBER, START ADDRESS, AND OTHERS CHOSEN FROM TT_SRPT OR ENTERED EXTERNALLY]
    248 --> 249[ACQUIRE AND SET ATTRIBUTE INFORMATION ON VTS NUMBER OBTAINED FROM VTS_ATTR]
    249 --> 250([END])
  
```

FIG. 80

```

graph TD
    S10([MENU SEARCH  
IN VMG]) --> S11[n = 1]
    S11 --> S12[VMGM_LU_SRP(n)  
ACQUISITION]
    S12 --> S13{B = b ?}
    S13 -- YES --> S17[VMGM_LU(n)  
ACQUISITION]
    S13 -- NO --> S14[n = n + 1]
    S14 --> S15{n > a ?}
    S15 -- NO --> S12
    S15 -- YES --> S16([END])
    S17 --> S18[VMGM_PGC NO. WITH  
ENTRY TYPE = 1 AND  
MENU ID = 0010b IS  
ACQUIRED]
    S18 --> S19([PGC  
PLAYBACK])
  
```



INTERACTIVE MOVIE SERIES

1 MR. X'S LIFE

2 MRS. Y'S LIFE

FIG. 82

MR. X'S LIFE
(INTERACTIVE MOVIE SERIES)

1. INFANCY

2. YOUTH

3. MIDDLE AGE

4. OLD AGE

FIG. 84

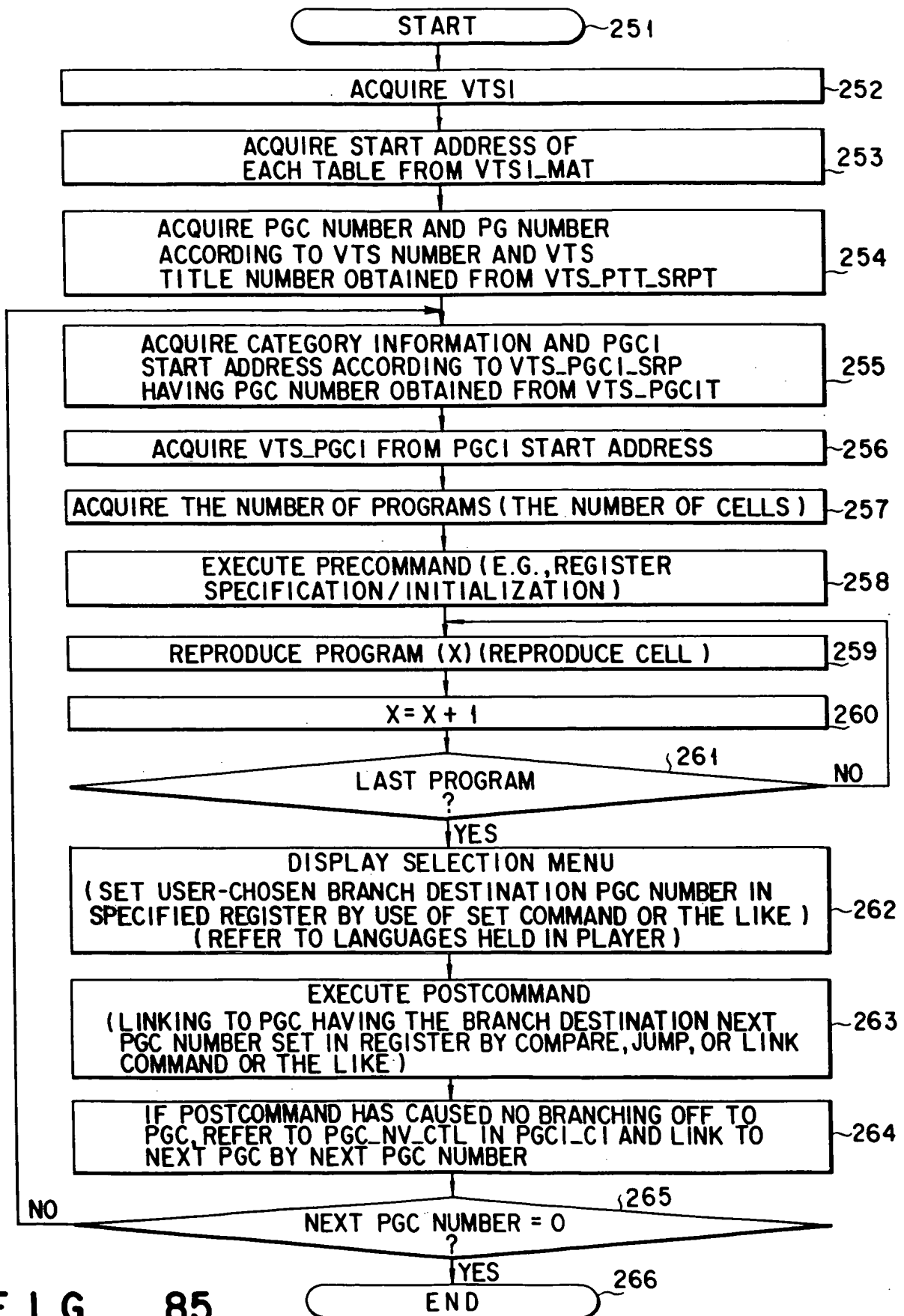


FIG. 85

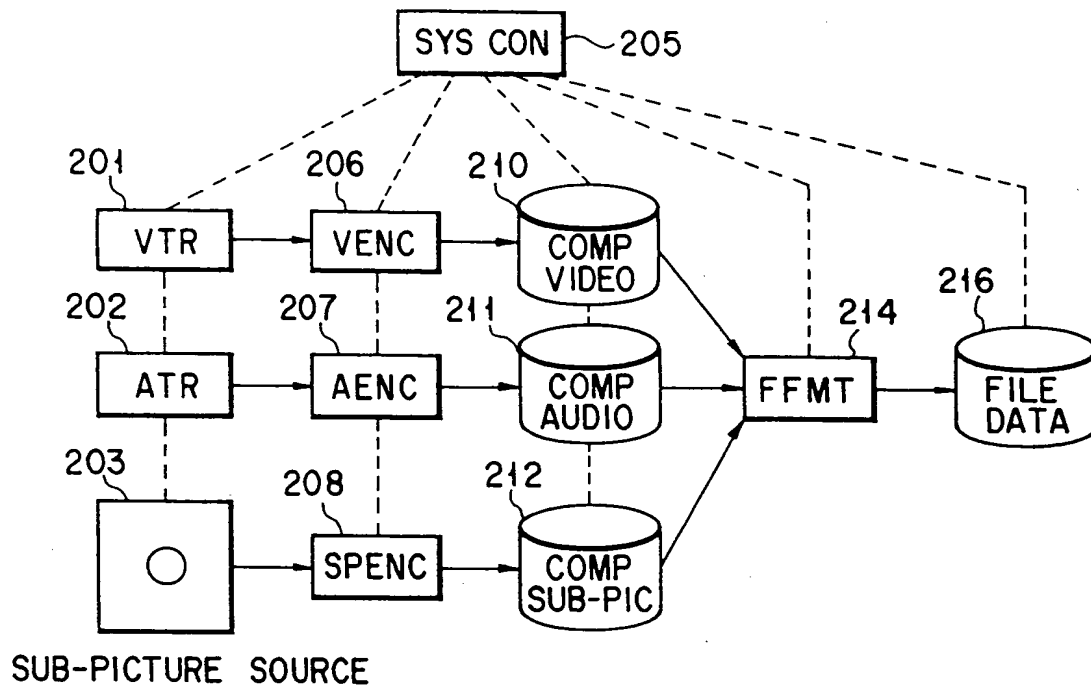
[illegible]

FIG. 88

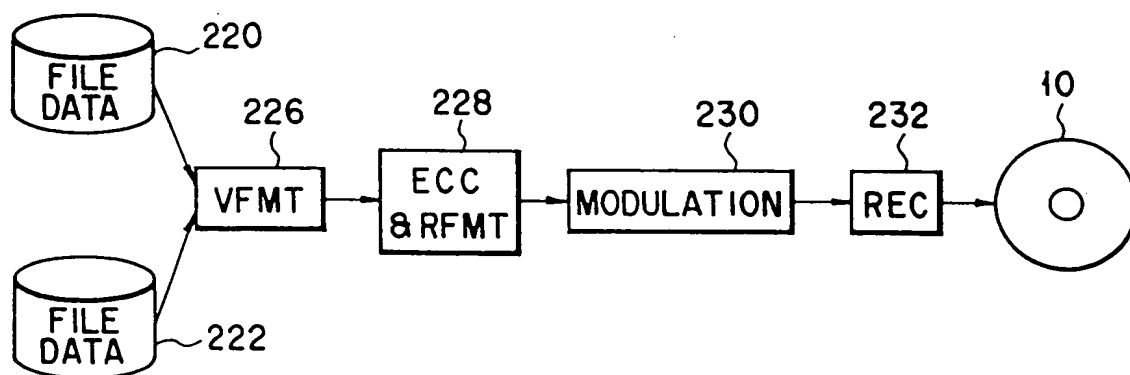
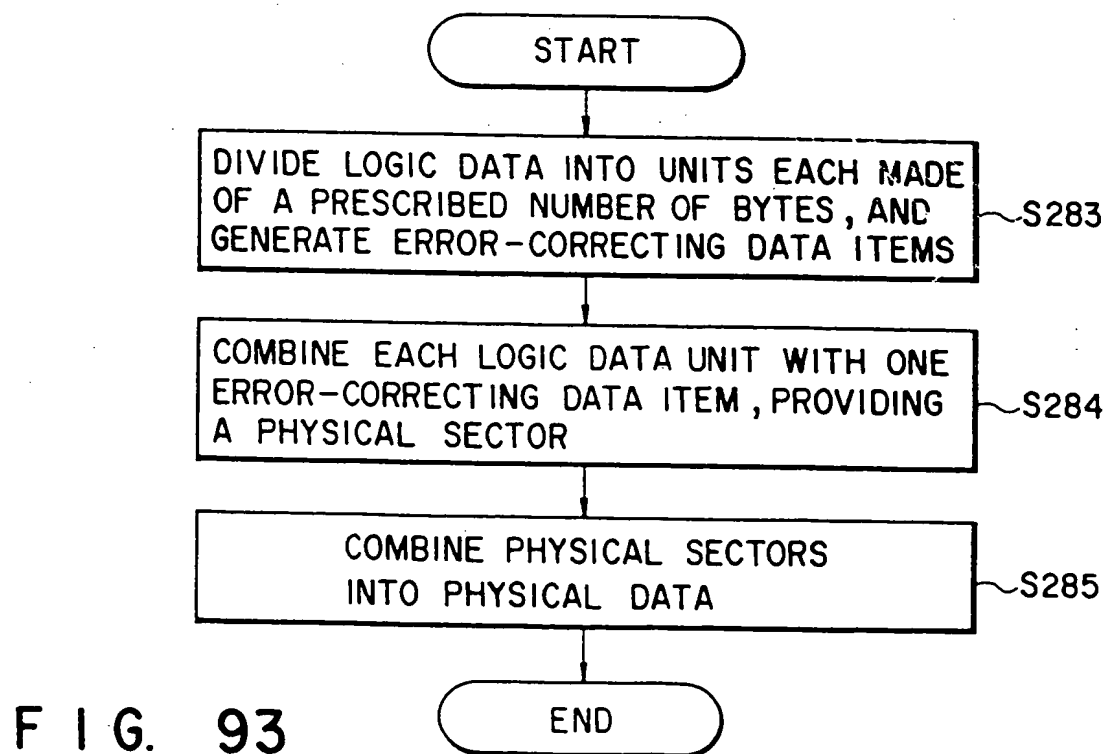
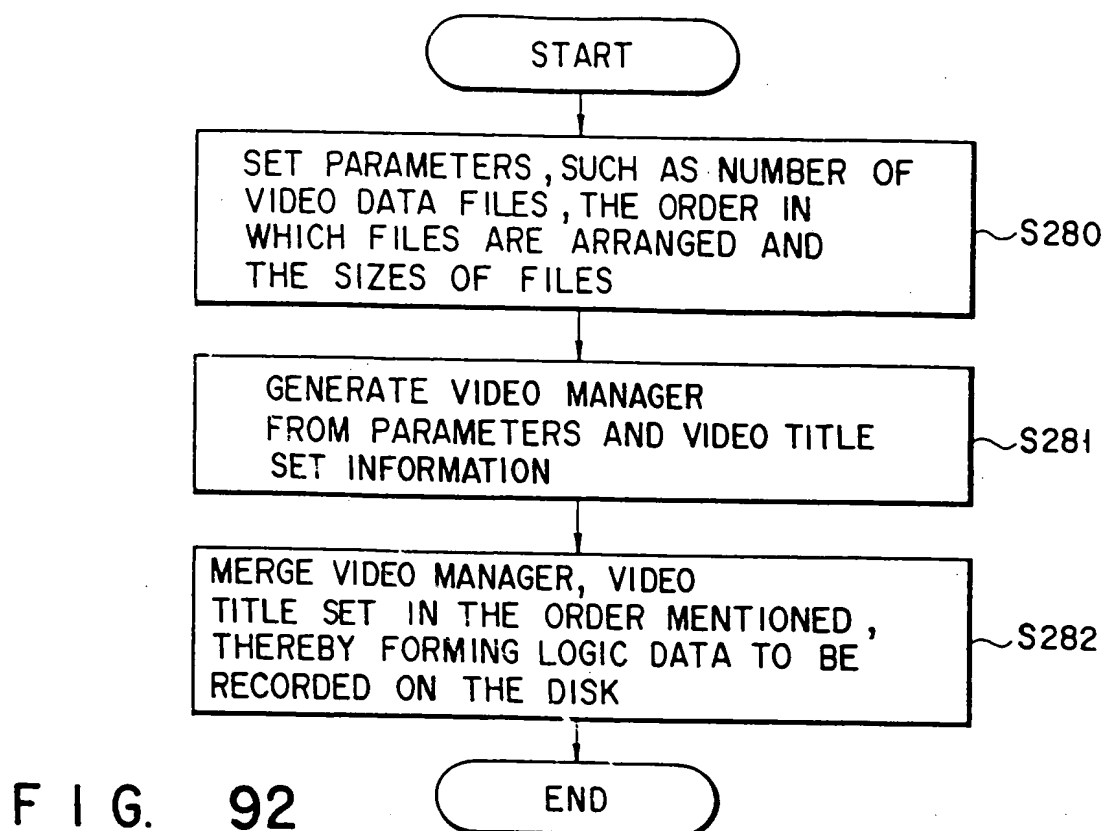


FIG. 91

000290" 4260960



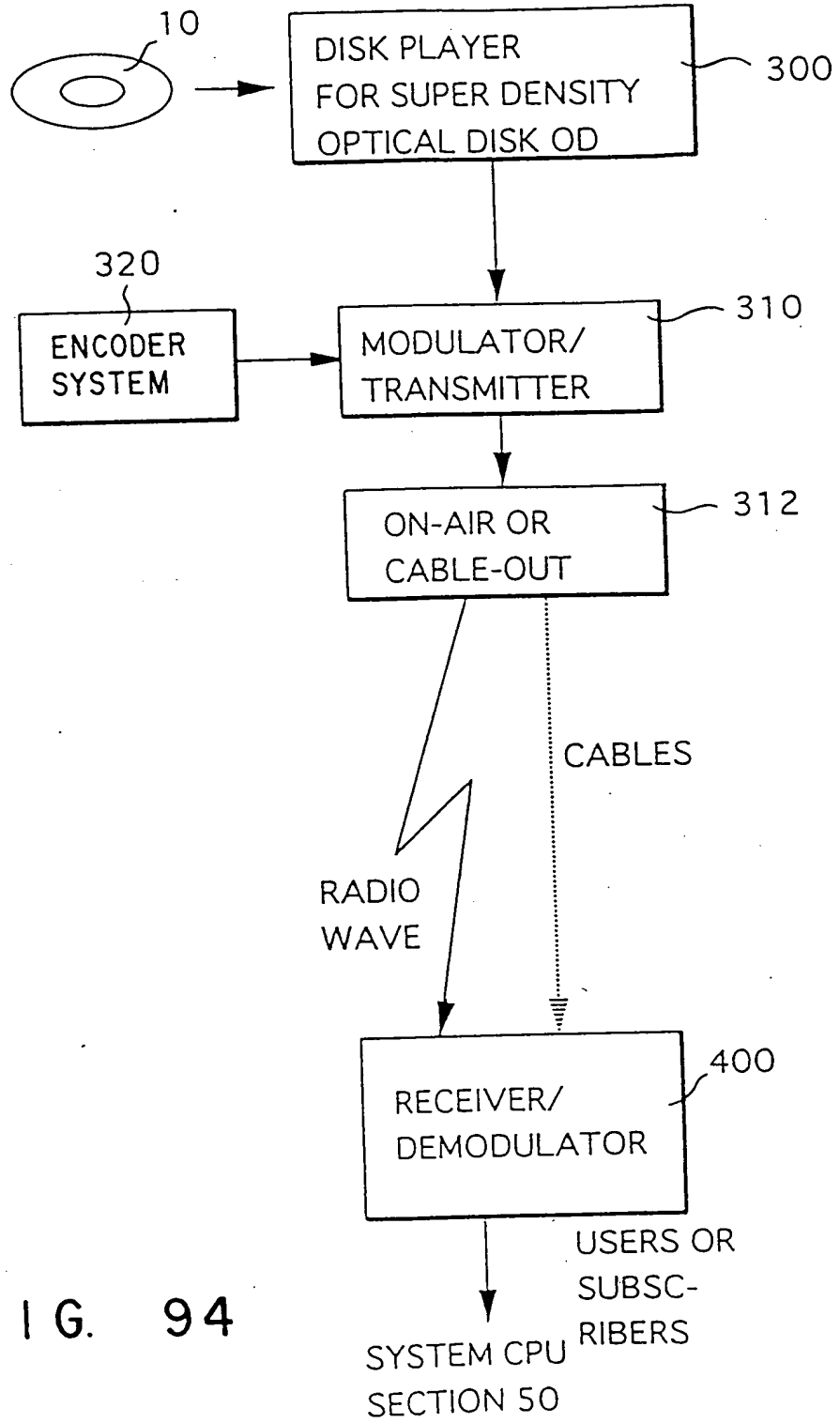


FIG. 94

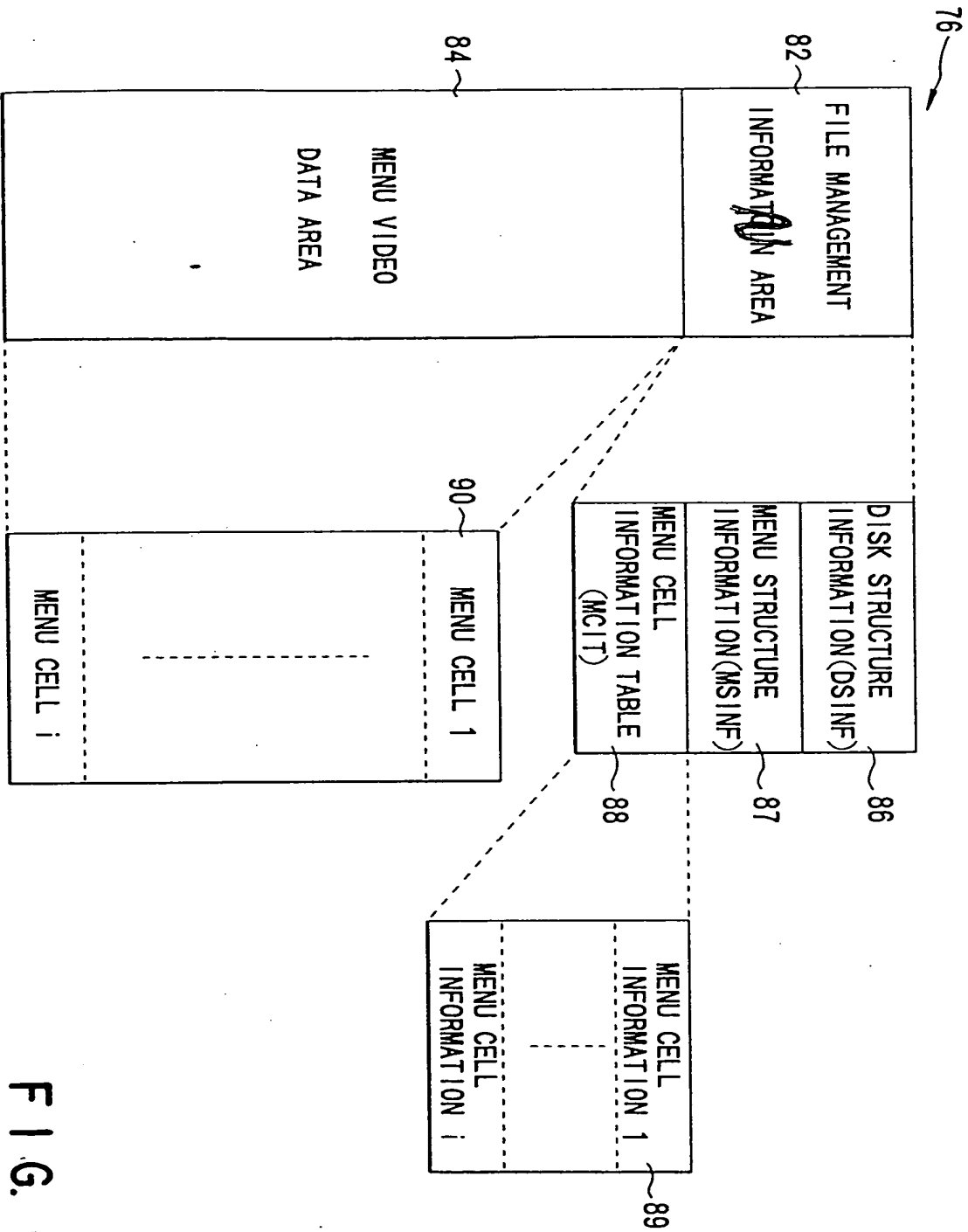


FIG. 5

09609247-063000

CELL INFORMATION (CI)

PARAMETER	CONTENT
CCAT	CELL CATEGORY
CTIME	CELL REPRODUCTION TIME
CALBN	CELL STARTING LOGICAL BLOCK NUMBER
CNLB	STRUCTURE LOGICAL BLOCK NUMBER

FIG. 9

SEQUENCE INFORMATION (SI)

PARAMETER	CONTENT
SCAT	SEQUENCE CATEGORY
SNPRG	NUMBER OF STRUCTURE PROGRAMS
SNCEL	NUMBER OF STRUCTURE CELLS
STIME	SEQUENCE REPRODUCTION TIME
SCINF	SEQUENCE CONTROL INFORMATION

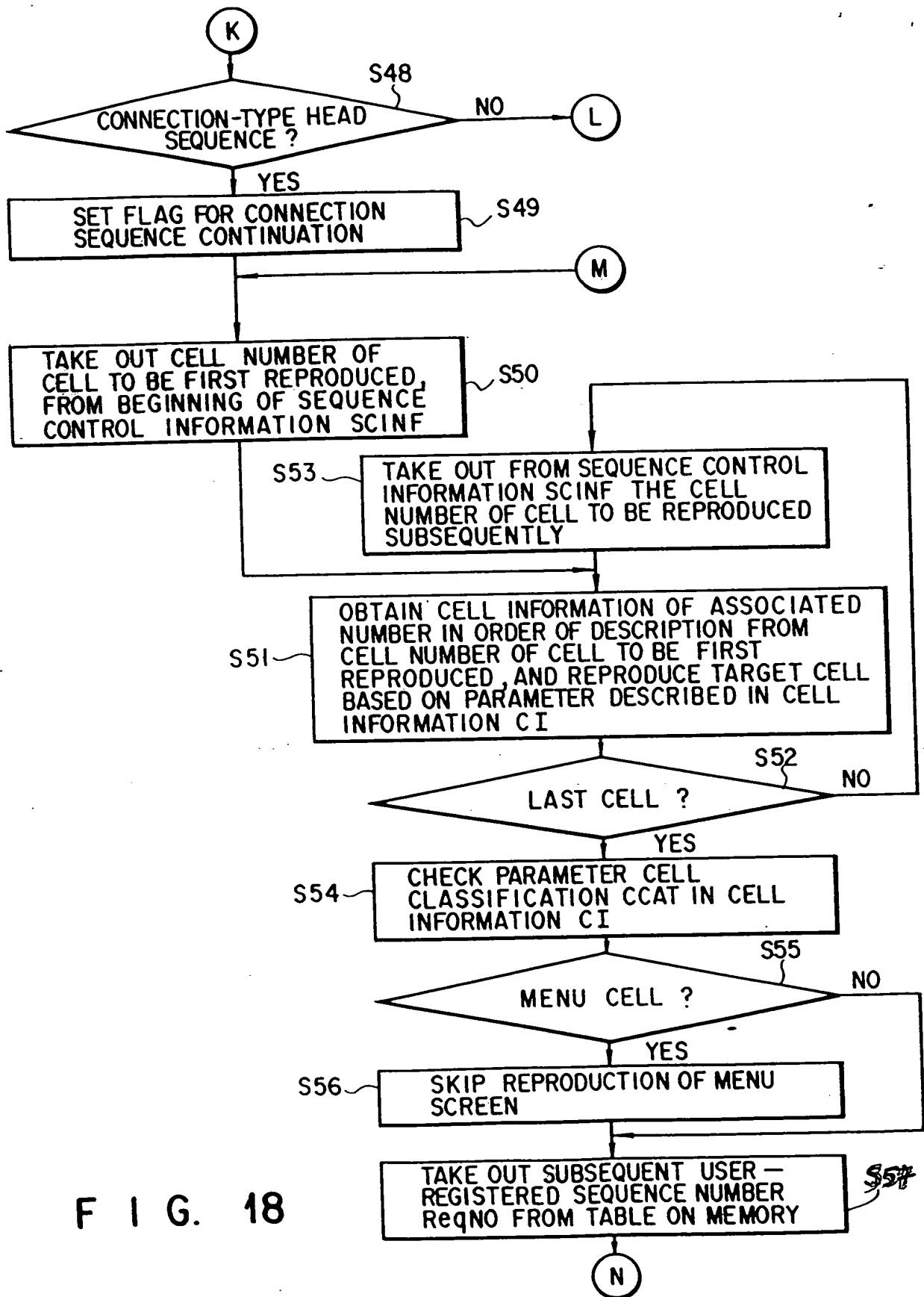
FIG. 10

FILE MANAGEMENT TABLE (FMT)

PARAMETER	CONTENT
FFNAME	FILE NAME
FFID	FILE IDENTIFIER
FNSQ	TOTAL NUMBER OF SEQUENCES
FNCEL	NUMBER OF CELLS
FSASIT	SIT START ADDRESS
FSACIT	CIT START ADDRESS
FSAESI	SEQUENCE INFORMATION START ADDRESS
FSADVD	VIDEO DATA START ADDRESS
FNAST	NUMBER OF AUDIO STREAMS
FAATR	AUDIO STREAM ATTRIBUTE

FIG. 11

000290-24260960



F I G. 18

F I G. 26

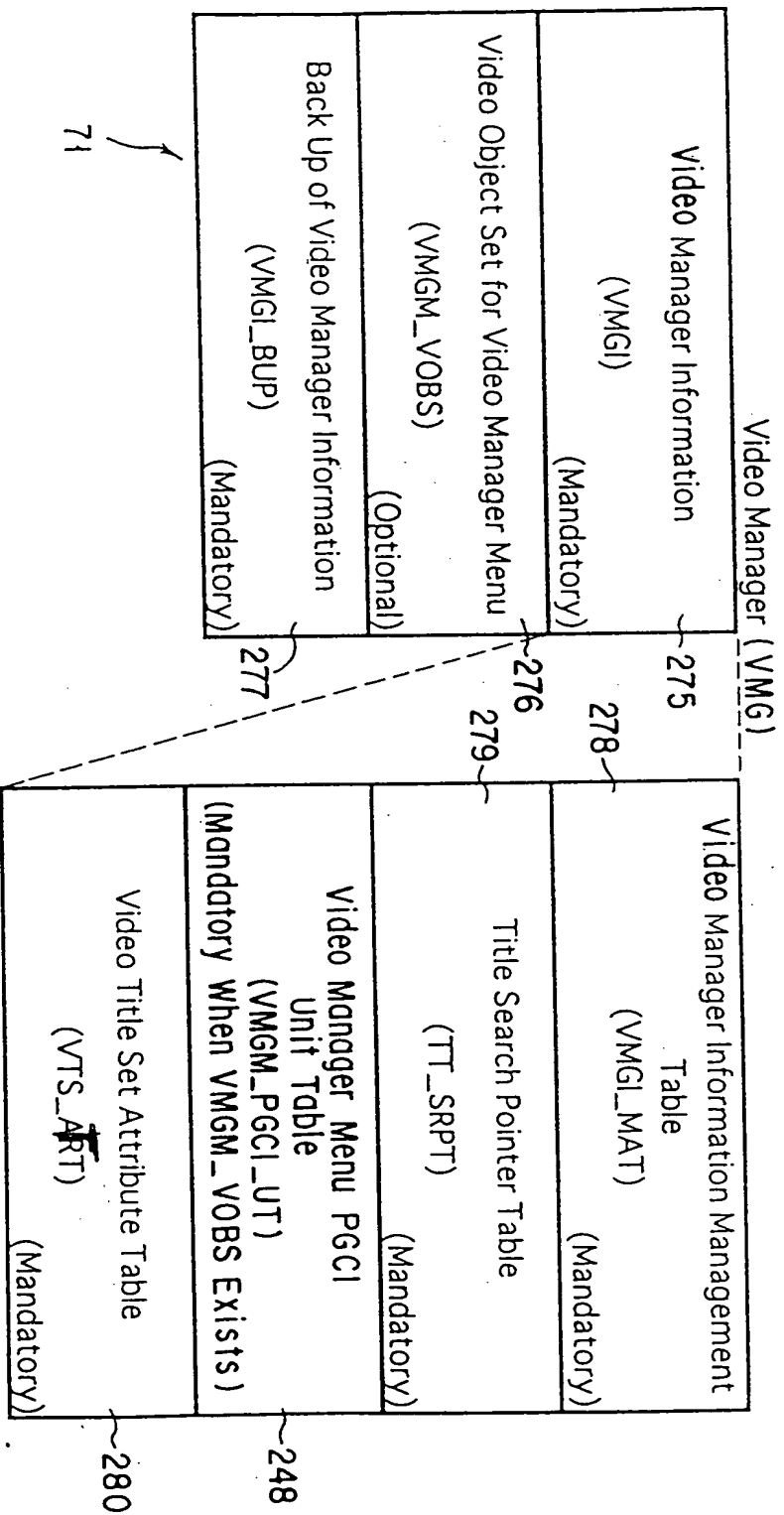


FIG. 27

[illegible]FIG. 31FIG. 32

VTSPGCIT

Video Title Set Program Chain Information Table Information (VTSPGCIT_I)	302
VTSPGCI #1 Search Pointer (VTSPGCIT_SRP#1)	303
VTSPGCI #2 Search Pointer (VTSPGCIT_SRP#2)	
:	
VTSPGCI #n Search Pointer (VTSPGCIT_SRP#n)	
VTSPGCI #1 (VTSPGCI 1)	304
:	
VTSPGCI #n (VTSPGCI n)	

300

FIG. 50


```

graph TD
    S([START]) --> A1[ACQUIRE VMGI]
    A1 --> A2[ACQUIRE START ADDRESS OF EACH TABLE FROM VMGI_MAT]
    A2 --> D1{IS USER INPUT PRESENT}
    D1 -- YES --> D2{IS VMGM_VOBS OF MENU DATA PRESENT}
    D1 -- NO --> D2
    D2 -- YES --> A3[ACQUIRE AND SET ATTRIBUTE INFORMATION ON MAIN VIDEO, AUDIO, AND SUB-PICTURE OF VMGM]
    D2 -- NO --> A4[ACQUIRE VTS NUMBER, TITLE NUMBER, START ADDRESS, AND OTHERS CHOSEN FROM TT_SRPT OR ENTERED EXTERNALLY]
    A3 --> A4
    A4 --> A5[DISPLAY MENU FOR SELECTION (REFER TO LANGUAGES HELD IN PLAYER)]
    A5 --> A6[ACQUIRE VTS NUMBER, TITLE NUMBER, START ADDRESS, AND OTHERS CHOSEN FROM TT_SRPT OR ENTERED EXTERNALLY]
    A6 --> A7[ACQUIRE AND SET ATTRIBUTE INFORMATION ON VTS NUMBER OBTAINED FROM VTS_ATTR]
    A7 --> E([END])

```

FIG. 80

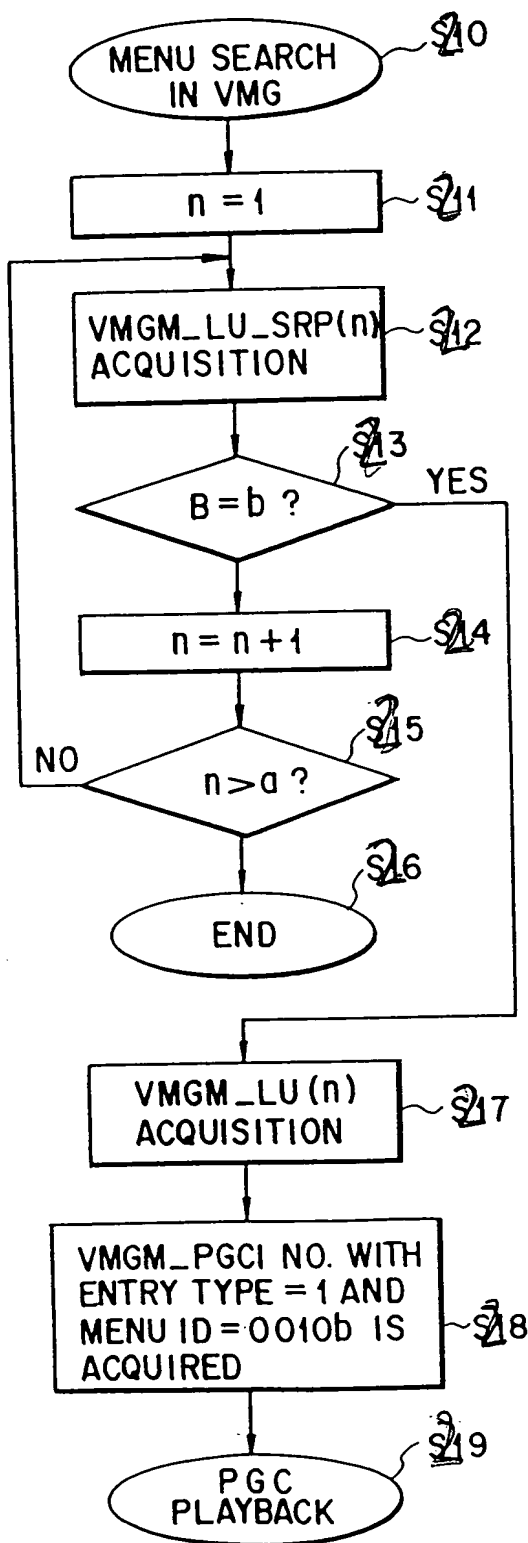


FIG. 81

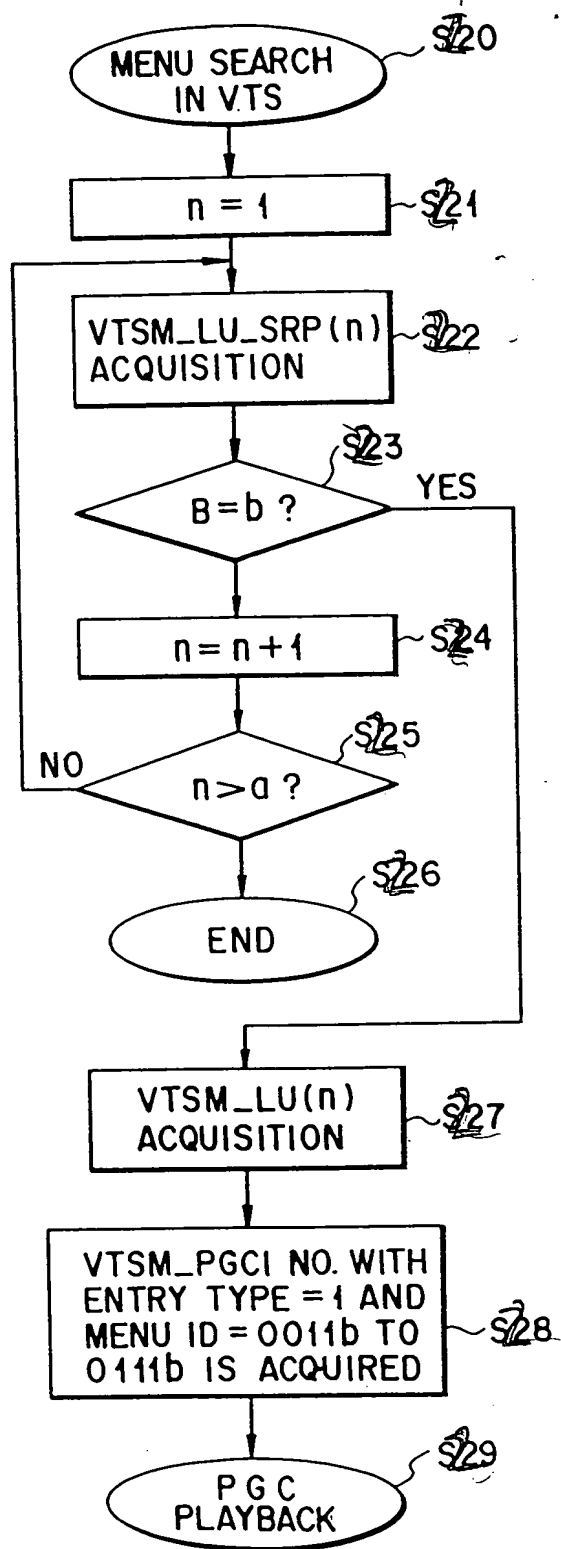


FIG. 83

000000 4200960

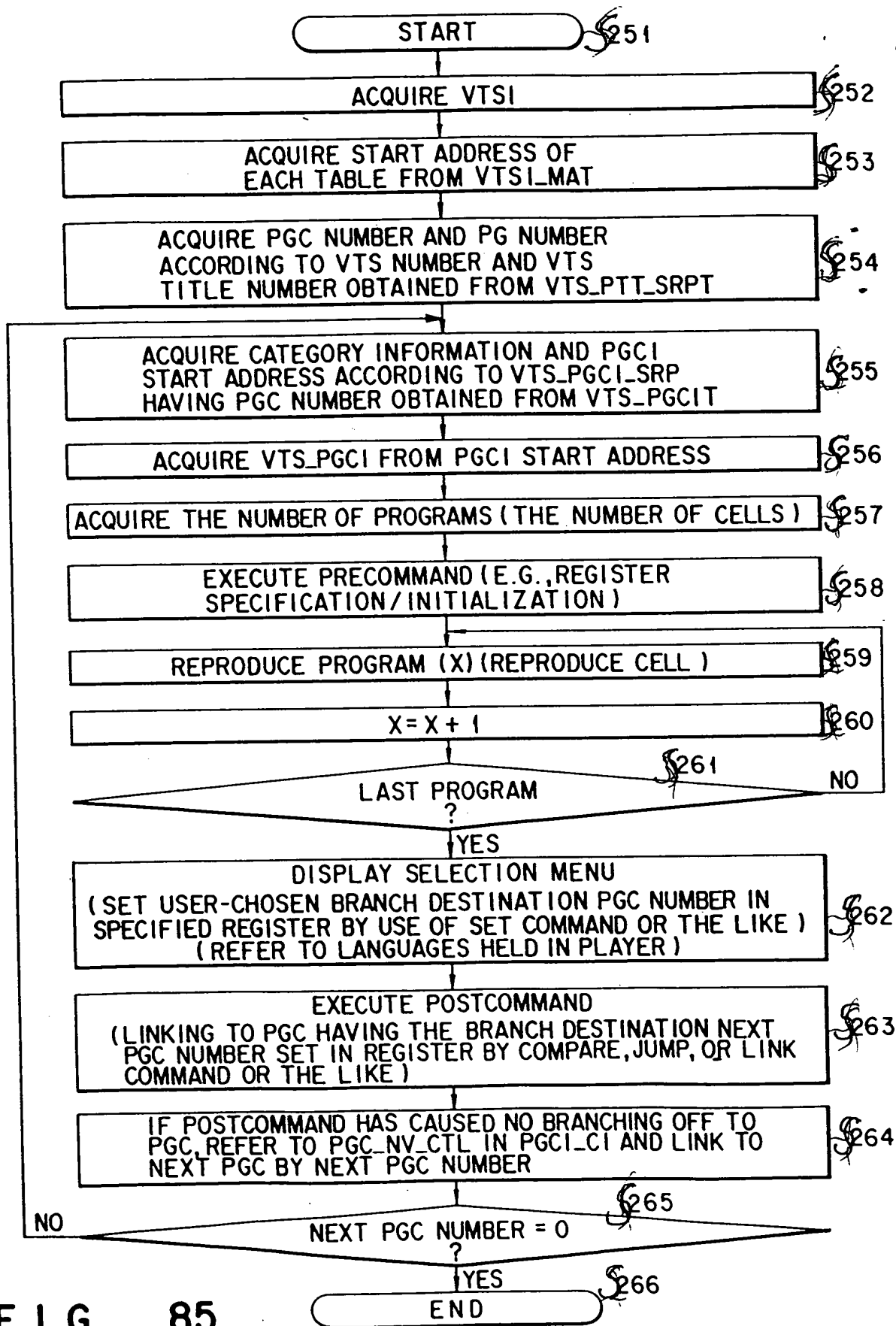


FIG. 85